SONY

TRINITRON® COLOR VIDEO MONITOR

BVM-D9H1A

CHASSIS NO. SCC-P31C-A

BVM-D9H1E

CHASSIS NO. SCC-G10D-A

BVM-D9H1U

CHASSIS NO. SCC-G09F-A

BVM-D9H5A

CHASSIS NO. SCC-P31F-A

BVM-D9H5E

CHASSIS NO. SCC-G10G-A

BVM-D9H5U

CHASSIS NO. SCC-G09G-A

Trinitron

Multiformat

MAINTENANCE MANUAL

1st Edition

Serial No. 2000001 and Higher (ALL MODELS)

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

WARNING!!

AN INSULATED TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY A ⚠ MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION!!

AFIN D'ÉVITER TOUT RISQUE D'ÉLECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

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BVM-D9H5J/D9H5U/D9H5E/D9H5A
BVM-D14H1J/D14H1U/D14H1E/D14H1A
BVM-D14H5J/D14H5U/D14H5E/D14H5A

HR Trinitron
Multiformat

OPERATION MANUAL Japanese/English
1st Edition
Serial No. 2000001 and Higher

Section 1
Operating Instructions

This section is extracted from operation manual.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

AVERTISSEMENT

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'écarter tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

WARNUNG

Um Feuergefahr und die Gefahr eines elektrischen Schlages zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur einem Fachmann.

ADVERTENCIA

Para evitar incendios o el riesgo de electrocución, no exponga la unidad a la lluvia ni a la humedad.

Para evitar descargas eléctricas, no abra la unidad. En caso de avería, solicite los servicios de personal cualificado.

ATTENZIONE

Per evitare incendi o cortocircuiti, l'apparecchio non deve essere esposto alla pioggia o all'umidità.

Per evitare scosse elettriche, non aprite l'apparecchio. Per le riparazioni rivolgetevi solo a personale qualificato.

CAUTION:
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION
Il y a un risque d'explosion si la pile est mal insérée. Remplacer la pile uniquement par une pile de même type ou de type équivalent recommandé par le fabricant. Jeter les piles usées conformément aux instructions du fabricant.

VORSICHT:
Es besteht Explosionsgefahr, wenn die Batterie inkorrekt eingelegt wird.
Es darf nur eine identische oder eine vom Hersteller empfohlene Batterie des gleichen Typs eingesetzt werden. Entladene Batterien sind nach den Anweisungen des Herstellers zu entsorgen.

PRECAUCION
Peligro de explosión en caso de haberse instalado incorrectamente la betería.
Cambie sólo por una del mismo tipo o especificaciones equivalentes, de entre las recomendadas por el fabricante. Las baterías viejas se deben eliminar siguiendo las instrucciones del fabricante.

ATTENZIONE:
Pericolo di esplosione se la pila viene sostituita scorrettamente.
Sostituirla solo con un'altra uguale o di un tipo equivalente consigliato dal fabbricante. Gettare via le pile usate secondo le istruzioni del fabbricante.

Note
The socket-outlet should be installed near the equipment and be easily accessible.

Remarque
La prise doit être près de l'appareil et facile d'accès.

Hinweis
Zur Trennung vom Netz ist der Netzstecker aus der Steckdose zu ziehen, welche sich in der Nähe des Gerätes befinden muß und leicht zugänglich sein soll.

Nota
La toma mural debe estar instalada cerca del equipo y debe accederse a ésta con facilidad.

Nota
La presa di corrente deve essere situata vicino all'apparecchio e deve essere facilmente accessibile.

For customers in the USA
(BVM-D9H1U/D9H5U, BVM-D14H1U/D14H5U)
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Für Kunden in Deutschland
Entsorgungshinweis: Bitte werfen Sie nur entladene Batterien in die Sammelboxen beim Handel oder den Kommunen. Entladen sind Batterien in der Regel dann, wenn das Gerät abschaltet und signalisiert "Batterie leer" oder nach längerer Gebrauchsdauer der Batterien "nicht mehr einwandfrei funktioniert". Um sicherzugehen, kleben Sie die Batteriepole z.B. mit einem Klebestreifen ab oder geben Sie die Batterien einzeln in einen Plastikbeutel.

Voor de klanten in Nederland



Bij dit produkt zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

- Dit apparaat bevat een Li-ion batterij voor memory back-up.
- De batterij voor memory back-up is vastgesoldeerd op de MA printplaat BT1.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.
- Gooi de batterij niet weg, maar lever hem in als KCA.

För kunderna i Sverige
Apparaten ma kun tilkoples jordet stikkontakt

For kunder i Norge
Apparatet må kun tilkoples jordet stikkontakt

For the customers in Europe
(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)
This product with the CE marking complies with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.
Compliance with these directives implies conformity to the following European standards:
- EN60950: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s):
E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

Pour les clients européens
(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)
Ce produit portant la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) (89/336/CEE) et à la Directive sur les basses tensions (73/23/CEE) émises par la Commission de la Communauté européenne.
La conformité à ces directives implique la conformité aux normes européennes suivantes:
- EN60950: Sécurité des produits
- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants:
E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé ex. studio de télévision).

Für Kunden in Europa
(BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)
Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt sowohl die EMV-Direktive (89/336/EEC) als auch die Direktive Niederspannung (73/23/EEC) der EG-Kommission.
Die Erfüllung dieser Direktiven bedeutet Konformität für die folgenden Europäischen Normen:
- EN60950: Produktsicherheit
- EN55103-1: Elektromagnetische Interferenz (Emission)
- EN55103-2: Elektromagnetische Empfindlichkeit (Immunität)

Dieses Produkt ist für den Einsatz unter folgenden elektromagnetischen Bedingungen ausgelegt:
E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio)

ATTENTION - When the product is installed in a rack:

a) Elevated operating ambient temperature
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacture's maximum rated ambient temperature (Tmra: 0°C to 35°C (32°F to 95°F)).

b) Reduced air flow
Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

c) Mechanical loading
Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

d) Circuit overloading
Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring.
Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

e) Reliable earthing
Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

f) Gap keeping
Upper and lower gap of rack-mounted equipment should be kept at least 44 mm (1 ¾ inches).

For the customers in the United Kingdom (BVM-D9H1E/D9H1A/D9H5E/D9H5A, BVM-D14H1E/D14H1A/D14H5E/D14H5A)

WARNING
THIS APPARATUS MUST BE EARTHED

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Ensure that your equipment is connected correctly - if you are in any doubt consult a qualified electrician.

Achtung - bei Installation des Geräts in einem Gestell:

a) Erhöhte Umgebungstemperatur bei Betrieb
Wird das Gerät in einem geschlossenen Gestell oder einem Gestell mit mehreren anderen Geräten installiert, kann die Umgebungstemperatur um das Gestell höher sein als die normale Umgebungstemperatur im Raum. Achten Sie daher bitte besonders darauf, das Gerät in einer Umgebung zu installieren, in der die Temperatur nicht über die vom Hersteller angegebene Umgebungstemperatur von 0 bis 35 °C (32 °F bis 95 °F) ansteigt (Tmra).

b) Reduzierte Belüftung
Das Gerät muß so im Gestell installiert werden, daß eine Belüftung gewährleistet ist, die für den sicheren Betrieb des Geräts erforderlich ist.

c) Mechanische Belastung
Das Gerät muß so im Gestell installiert werden, daß nicht durch eine ungleichmäßige mechanische Belastung Unfallgefahr entsteht.

d) Überlastung der Stromkreise
Der Anschluß des Geräts an das Versorgungsnetz erfordert sorgfältige Planung. Bitte beachten Sie insbesondere die Auswirkungen, die eine Überlastung der Stromkreise im Hinblick auf den Überspannungsschutz und die physischen Komponenten des Versorgungsnetzes haben kann.
Beachten Sie in diesem Zusammenhang unbedingt die Angaben auf dem Typenschild am Gerät.

e) Zuverlässige Erdung
Geräte, die in einem Gestell installiert werden, benötigen eine zuverlässige Erdung. Achten Sie insbesondere auf Anschlüsse an das Versorgungsnetz, die nicht direkt an einen Abzweigstromkreis, sondern indirekt, zum Beispiel über Verlängerungskabel, erfolgen.

f) Erforderliche Abstände
Halten Sie zur Ober- und Unterseite eines in einem Gestell installierten Geräts einen Abstand von 44 mm (1 ¾ inches) ein.

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Precautions

On safety

- Operate the unit only with a power source as specified in “Specifications” section.
- The nameplate indicating operating voltage, power consumption, etc., is located at the rear.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not drop or place heavy objects on the power cord. If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- Disconnect the power cord from the AC outlet by grasping the plug, not by pulling the cord.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- Use the supplied AC adaptor for the BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A models only. It is dangerous to use the AC adaptor for models other than these.

On installation

- Allow adequate air circulation to prevent internal heat build-up.
  Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On mounting the rack

When the monitor is mounted on the rack, the proximity of other equipment or a decrease in air circulation may cause heat to build up inside the monitor. Therefore, when mounting the monitor on the rack, ensure there is an adequate opening for ventilation or install a fan. The following operating conditions are needed:
Temperature: 0°C to 35°C (32°F to 95°F),
Optimum temperature: 20°C to 30°C (68°F to 86°F)

On the battery (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A only)

The MAIN POWER switch is not supplied with the above models. Therefore, when the power is turned off with a battery installed, the monitor is set to standby mode and a small amount of power is consumed. When the monitor is not used for a long period, remove the battery.

On cleaning

To keep the unit looking brand-new, periodically clean it with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleansers since they will damage the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Do not throw away the carton and packing materials. They make an ideal container which to transport the unit.
If you have any questions about this unit, contact your authorized Sony dealer.

On magnetism

- Do not place the unit near any objects or pieces of equipment which generate magnetism, such as magnets, speakers, electric clocks, toys using magnets, health appliances, etc. Magnetism will cause picture bounce, oscillations or picture discoloration.
- Also, the picture may become fuzzy or the colors may not reproduce correctly due to earth magnetism. This depends on direction that the unit is installed. This is not equipment failure. In such a case, simply degauss the unit.

On the CRT

- Dust accumulates on the CRT easily. Clean the CRT when necessary with a soft cloth.
  The surface of the CRT is easily scratched; therefore, do not rub or touch the surface of the CRT unnecessarily since this may result in a scratched picture tube.
- If you touch the surface of the CRT, you may feel a weak electrical shock. This is simply static electricity that is generated on the surface of the CRT. It will not affect the human body.

On using as the monitor for 4:3 signals

The 16:9 mask is installed at the factory. When the display is set to the 4:3 aspect ratio, the upper and lower portions of the display are masked and you cannot view the upper and lower portions of the picture. Therefore, when you want to display the picture in 4:3 aspect ratio, install the supplied 4:3 mask.

Overview

The BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A are 9 -inch Trinitoron®[1] Color Monitors. The BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A are 14-inch[2] Trinitoron® Color Monitors.

Features

Multiformat

The monitor supports the principal format (480I/480P/720P/1080I) for the digital broadcasts, NTSC and PAL color systems, and a wide variety of signals[3] whose horizontal frequency is between 15 kHz and 45 kHz.

High resolution picture tube

The HR Trinitron picture tube produces a clear, high resolution image.

Model	Aperture grille pitch	Resolution at the center of the picture
BVM-D9H1U/ D9H1E/D9H1A/ D9H5U/D9H5E/ D9H5A	0.25 mm	450 TV lines (4:3) 340 TV lines (16:9)
BVM-D14H1U/ D14H1E/D14H1A/ D14H5U/D14H5E/ D14H5A	0.25 mm	800 TV lines (4:3) 600 TV lines (16:9)

Separate control unit (BVM-D9H1U/D9H1E/D9H1A/D14H1U/D14H1E/D14H1A)

Using a separate control unit reduces the space needed for the equipment.
The monitor is controlled by a separate control unit, such as an optional BKM-10R/11R Monitor Control Unit or by daisy chain connections.

Controlling monitor groups

Up to 32 monitors can be controlled from one control unit by the RS-485 serial remote connections. You can control individual monitors or monitor groups simply by entering monitor address or group numbers. You can also execute the same operation on all connected monitors, or put all connected monitors into the same setup and adjustment state.

Auto chroma phase and white balance functions

The chroma and phase of the decoder are automatically adjusted with the auto chroma phase function and the color temperature is automatically adjusted with the auto white balance function by using the BKM-14L Auto Setup Probe, etc.

4:3 area marker

It is possible to check the 4:3 aspect area in the 16:9 picture by displaying the 4:3 marker.

Expandable input capability

You can obtain HD SDI signals, D1 SDI signals, NTSC/PAL signals or YP_BP_R/RGB signals by installing the optional input adaptors at the rear of the monitor. The input connector configuration can be easily modified and up to three adaptors can be installed. The BKM-129X Analog Component Input Adaptor is installed at SLOT 1 at the factory.

Stable color temperature

The beam current feedback circuit maintains a constant color temperature over long periods of time.

Blue-only mode convenient for monitoring noise

All three CRT cathodes can be driven with a blue signal, producing a monochrome display. This mode is convenient for chroma and phase adjustment, and for monitoring VTR noise.

Other features

- The monitor's various functions and operating conditions can be set with on-screen menus.
- Has both RS-485 serial remote and relay contact parallel remote control connectors.
- H delay and V delay functions for simultaneous checking of the horizontal and vertical synchronization signals. VITS (Vertical Interval Test Signal) checking is also possible.
- Auto and manual degaussing.
- The monitor may be mounted in an EIA-standard 19-inch rack, using an optional MB-520 (for 9-inch monitor) or BKM-30E14/31E14 (for 14-inch monitor) Rack Mount Kit.
- The appearance of the monitor can be changed to 16:9 or 4:3 display by the replacement of a mask.
- Operable by using a Sony lithium ion battery (BP-L60/L90A) or DC 12 V external power source. (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A only)
- Built-in audio reproduce circuit and speaker. (BVM-D9H5U/D9H5E/D9H5A only)

Options

For external control

BKM-10R Monitor Control Unit

A controller for the BVM-D9H/D14H series video monitors, allowing you to control multiple monitors from one control unit.

BKM-11R Monitor Control Unit

A controller for the BVM-D9H/D14H and other BVM/HDM series video monitors, allowing you to control multiple monitors from one control unit.

BKM-14L Auto Setup Probe

A probe, allowing the automatic adjustment of this monitor's color temperature.

For installation

MB-520 Mounting Bracket

Mounting bracket to mount one or two BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A in a 19-inch EIA standard rack.

MB-519 Mounting Panel

Panel for the BVM-D9H1U/D9H1E/D9H1A to fill up the space created when mounting a video monitor to a rack with the MB-520 mounting bracket.

MB-509 Mounting Panel

Panel for the BVM-D9H5U/D9H5E/D9H5A to fill up the space created when mounting a video monitor to a rack with the MB-520 mounting bracket.

BKM-30E14 Rack Mount Kit

Rack mount kit for mounting the BVM-D14H5U/D14H5E/D14H5A in an EIA standard 19-inch rack.

BKM-31E14 Rack Mount Kit

Rack mount kit for mounting the BVM-D14H1U/D14H1E/D14H1A in an EIA standard 19-inch rack.

Others

VF-508 Monitor ENG Kit

Kit that includes a light intercepting hood which is mounted on the front of a monitor, and a connector protector which is mounted on the rear.

Input adaptors

The input connector panel is configured by sliding the optional input adaptor into the input option slot at the rear of the monitor. Up to three adaptors can be installed to the monitor.
The input signal type for each connector of the adaptor is set with the INPUT CONFIG menu, in accordance with the configuration of the connector panel.

Note

When installing the adaptor, be sure to perform the necessary input signal setup with the INPUT CONFIG menu. If the setup is not performed, the adaptors may not function correctly.

For information about the INPUT CONFIG menu, see "C Setting the Input Configuration — INPUT CONFIG Menu" on page 35(E).

1) Trinitron® is a registered trademark of Sony Corporation.
2) 9-inch and 14-inch refer to the CRT size of the monitor. For effective picture size, see "Specifications" on page 47(E).
3) For details on the signal format, see "Available Signal Format" on page 53(E).

Overview

BKM-120D SDI 4:2:2 Input Adaptor
Includes a decoder for serial digital component signals. D1 SDI input/output connectors for two serial digital channels and active loop-through output connectors.

BKM-127W NTSC/PAL Input Adaptor
Includes decoders for analog composite NTSC and PAL signals. Input/output connectors for two analog channels and one YC channel.

BKM-129X Analog Component Input Adaptor
Includes input/output connectors for one analog channel and EXT SYNC input/output connectors.

The BKM-129X is mounted to the monitor at the factory.

BKM-142HD HD SDI Input Adaptor
Includes a decoder for HD serial digital signals and input/output connectors for two serial digital signal channels and monitor output connector.

Notes

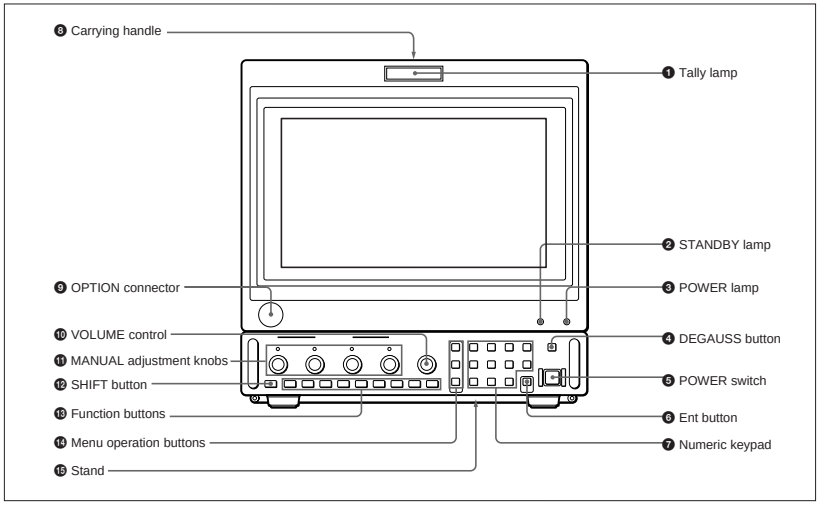
- The BKM-142HD uses two input option slots.
- The signal from MONITOR OUT connector does not satisfy the ON-LINE signal specifications.

Location and Function of Parts

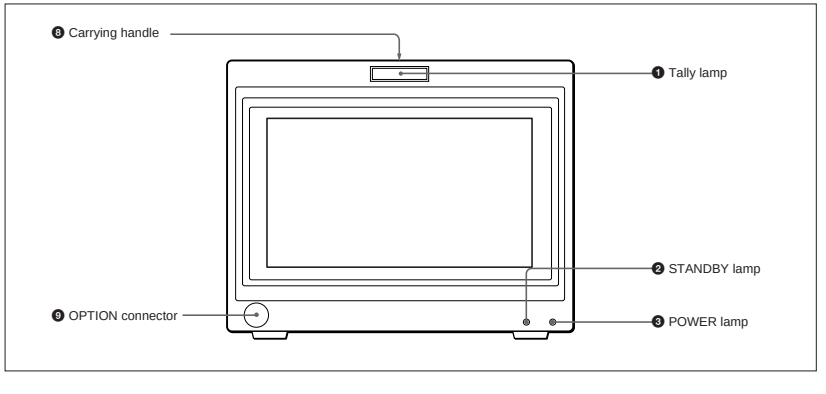
BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A Front Panel

For the BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A, see pages 16(E) to 20(E).

BVM-D9H1U/D9H1E/D9H1A



BVM-D9H5U/D9H5E/D9H5A



Location and Function of Parts

This manual explains the location and function of parts and controls of the BVM-D9H5U/D9H5E/D9H5A. The explanation also applies to the optional BKM-10R/11R Monitor Control Unit.

❶ Tally lamp
With factory settings, the tally lamp lights as follows when the pins of the PARALLEL REMOTE [1] connector on the rear panel are shorted:
– in red, when pins No.3 and No.9 are shorted.
– in green, when pins No.4 and No.9 are shorted.
– in amber, when pins No.3, No.4 and No.9 are shorted.

The tally lamp lights as follows when the pins of the PARALLEL REMOTE [2] connector on the rear panel are shorted:
– in red, when pins No.3 and No.5 are shorted.
– in green, when pins No.4 and No.5 are shorted.
– in amber, when pins No.3, No.4 and No.5 are shorted.

By changing the setting in the REMOTE menu, different pins on the remote connector can be used to control the tally lamp.

For information about the REMOTE menu, see "[D] Assigning the Remote Control Functions — REMOTE Menu" on page 37(E).

❷ STANDBY lamp
Lights when the monitor is in standby mode. The monitor will be in standby mode under the following conditions:
• The AC adaptor or battery is attached to the monitor when the STANDBY MODE menu of the SYSTEM CONFIG menu is set to ON.
• The monitor is changed from operation mode to standby mode by external control.

For information about the SYSTEM CONFIG menu, see "[E] Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu" on page 39(E).

❸ POWER lamp
Lights when the monitor is put into operation mode from standby mode (see STANDBY lamp ❷) by pressing the POWER switch ❺.

Note
When the STANDBY lamp ❷ is blinking, the monitor cannot be put into operation mode (internal data initialization is taking place). Wait until the STANDBY lamp ❷ is steadily lit.

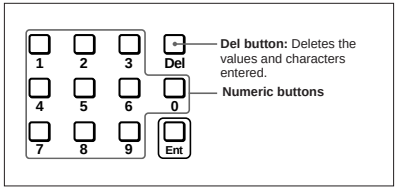
❹ DEGAUSS button
Press to degauss the CRT (every time the monitor is turned on, the CRT is degaussed automatically). To degauss again, wait for more than five minutes.

❺ POWER switch
Press to turn on/off the monitor. By setting with the ADDRESS menu, it is possible to turn on/off the power of the specified monitors only, or of all monitors at the same time.

For information about the ADDRESS menu, see "Selecting the Monitor to Control — ADDRESS Menu" on page 45(E).

❻ Ent button
Use to confirm the items, values and characters entered.

❼ Numeric keypad
Use to designate the channel number for the input signal to be monitored, or to enter the setting values with the menus.



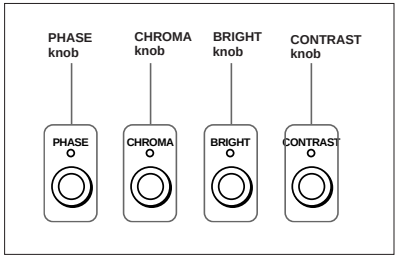
❽ Carrying handle
Pull out to use for carrying the monitor.

❾ OPTION connector
Used to connect the BKM-11R Monitor Control Unit or Auto Setup Probe (BKM-14L, etc.)

❿ VOLUME control
Adjusts the volume of the audio signals from the equipment connected to the AUDIO IN jacks at the rear of the monitor.

⓫ MANUAL adjustment knobs
Each press of one of these knobs turns the knob's green LED on or off. When the corresponding knob is on (lit), it is possible to manually adjust the contrast, brightness, chroma and phase by turning the corresponding knobs. The PHASE knob is also used to select the items or enter the setting values with the menus. It is possible to set the preset value for each adjusting item with the CONTROL PRESET ADJ menu.

For Information about the CONTROL PRESET ADJ menu, see "[A] Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ menu" on page 31(E).



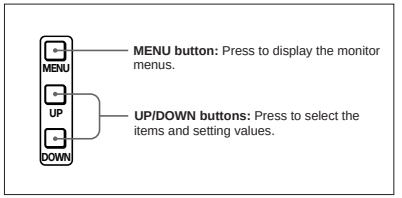
Note
The PHASE and CHROMA knobs may not be adjusted due to the signals. However, these knobs are used for selecting the items or entering the setting values with the menus.

⓬ SHIFT button
Press to select one of the two functions designated to the function buttons ⓭.
Each time the SHIFT button is pressed, the LED turns on (SHIFT ON: lits in umber) and off (SHIFT OFF.)
SHIFT OFF: The functions indicated above the function buttons can be used (the LED of the function button lits in green.)
SHIFT ON: The functions indicated below the function buttons can be used (the LED of the function button lits in amber.)

⓭ Function buttons
Change the operation conditions for the monitor. Each time the button is pressed, the LED turns on and turns off, and the operation conditions are changed. Each button has two functions. Select one of the two functions by pressing the SHIFT button ⓬. When the SHIFT button is set to ON, the LED lights in umber, and when the SHIFT button is set to OFF, the LED of each button lights in green.

For the functions of the function buttons in case of SHIFT OFF and SHIFT ON, see pages 10(E) and 11(E).

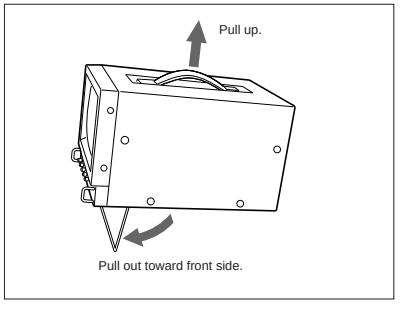
⓮ Menu operation buttons



For more information about menu operation, see "Basic Menu Operations" on page 25(E).

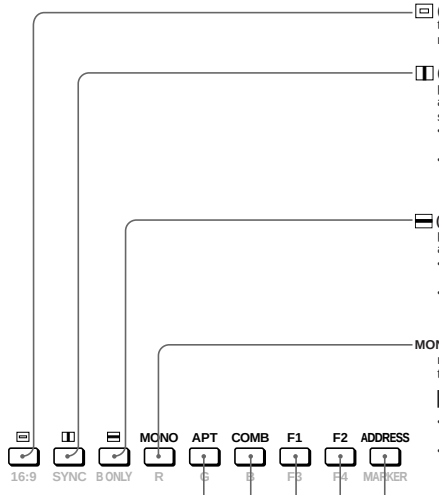
⓯ Stand
Pull out to use.

Using the Carrying Handle and Stand



Location and Function of Parts

Function buttons in SHIFT OFF mode (LEDs of function buttons in green)



(Underscan) button: When this button is pushed in (ON), the picture is underscanned by 3%, and four ends of the raster is displayed on the screen.

(H delay) button: When this button is pushed in (ON), the picture moves horizontally, and a horizontal sync signal appears approximately one quarter in the left edge of the screen.
- The brightness of the picture increases automatically, and it makes it easy to check the sync part.
- If it is pressed together with the button, a pulse cross picture is displayed.

(V delay) button: When this button is pushed in (ON), the picture moves vertically, and a vertical sync signal appears approximately in the center of the screen.
- The brightness of the picture increases automatically, and it makes it easy to check the sync part.
- If it is pressed together with button, a pulse cross picture is displayed.

MONO button: When this button is pushed in (ON), a monochrome picture is displayed. When the buttons is off, the monitor switches automatically color mode.

Notes
- The MONO button does not function with the RGB signal input.
- When the NTSC or PAL color signals are received and color burst signals are not input, the monitor does not switch to color mode.

ADDRESS button: When this button is pushed in (ON), the ADDRESS menu appears on the screen. By using the ADDRESS menu, operation conditions for multiple monitors are set.
For more information about the ADDRESS menu, see "Selecting the Monitor to Control — ADDRESS Menu" on page 45(E).

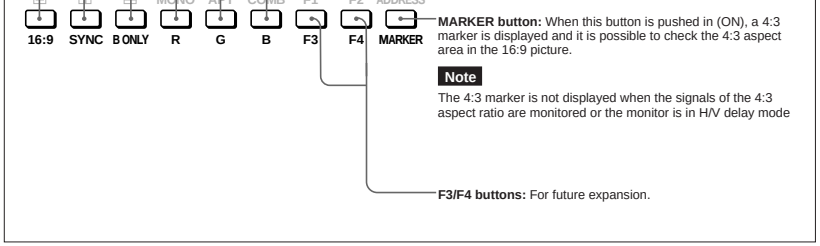
F2 button: When this button is pushed in (ON), you can access directly the MANUAL menu of the level 1 of the COLOR TEMP ADJ menu, if the short-cut function is assigned to this button.

F1 button: When this button is pushed in (ON), the characters disappear from the monitor on the MANUAL menu of the level 1 of the CONTROL PRESET ADJ menu, the MANUAL menu of the level 1 of the COLOR TEMP ADJ menu, and the ALIGNMENT menu.

COMB button: This button does not function with this monitor. However, when the BKM-127W NTSC/PAL Input Adaptor (optional) is installed and the NTSC or PAL color signals are received, the monitor can be used with the comb filter turned on.

APT (aperture) button: When this button is pushed in (ON), the frequency response can be modified. The degree of modification is set with the menu. (When RGB signals are input, the button does not function.)

Function buttons in SHIFT ON mode (LEDs of function buttons in amber)



16:9 button: When this button is pushed in (ON), the aspect ratio changes to 16:9, and when set to OFF, the aspect ratio changes to 4:3.
The aspect ratio is fixed to 16:9 when the signal other than 4:3 signal format is input. For details, see "Available Signal Format" on page 53(E).

SYNC button: When this button is pushed in (ON), the monitor synchronizes to the sync signal input to the SYNC connectors on the BKM-129X (EXT SYNC). When set to OFF, it synchronizes to the sync signal included in the signals being monitored (INT SYNC).

Notes
- When INT SYNC is selected, use a component including a sync signal on the Y signal, and use RGB signal including a sync signal on the G signal.
- When the BKM-129X is not installed to the monitor or serial digital signals are monitored, INT SYNC is automatically selected. You cannot select EXT SYNC.

B ONLY (blue only) button: When this button is pushed in (ON), red and green signals are cut, and only the blue signal is displayed as a monochrome picture. It makes it easy to adjust CHROMA and PHASE, and to check VTR noise.

R/G/B buttons: When these buttons are pushed in (ON), R(red), G(green), and B(blue) beams are cut respectively.

MARKER button: When this button is pushed in (ON), a 4:3 marker is displayed and it is possible to check the 4:3 aspect area in the 16:9 picture.

Note
The 4:3 marker is not displayed when the signals of the 4:3 aspect ratio are monitored or the monitor is in H/V delay mode

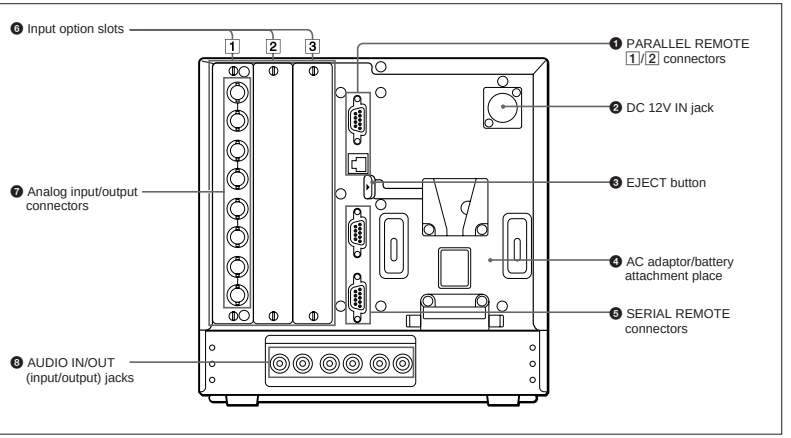
F3/F4 buttons: For future expansion.

http://getMANUAL.com

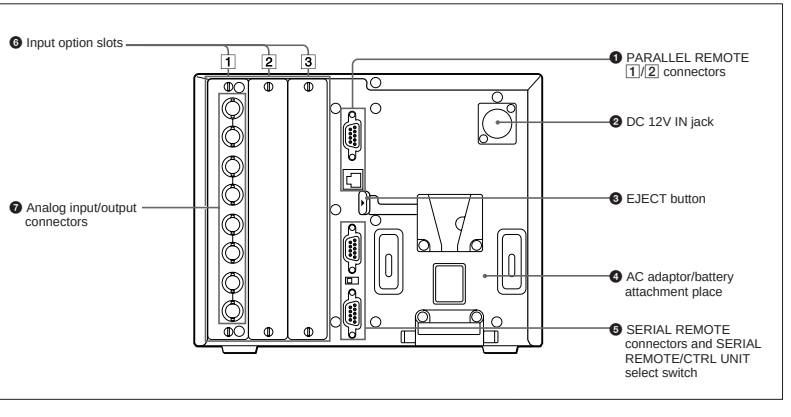
BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A Rear Panel

For the BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A, see pages 21(E) to 23(E).

BVM-D9H5U/D9H5E/D9H5A

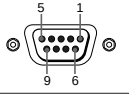


BVM-D9H1U/D9H1E/D9H1A



❶ PARALLEL REMOTE 1/2 connectors (1: female, D-sub 9-pin, 2: modular connector)
Form a parallel switch and controls the monitor externally. The pin assignment and factory setting function assigned to each pin are given below.

1: D-sub 9-pin



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	Select sync signal (SYNC button function)
6	Set underscan on or off
7	Set a 16:9 aspect ratio on or off
8	Set the 4:3 area marker display on or off
9	GND

2: modular connector



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	GND
6	Set underscan on or off

All pin function assignments can be changed with the REMOTE menu.

For information about the REMOTE menu, see " D Assigning the Remote Control Functions — REMOTE Menu" on page 37(E).

To switch each function between on and off or between enable and disable, change pin connections in the following way.

ON or enabled: Short each pin and pin 9 together **for D-sub 9-pin**.
Short each pin and pin 5 together **for modular connector**.

OFF or disabled: Leave each pin open.

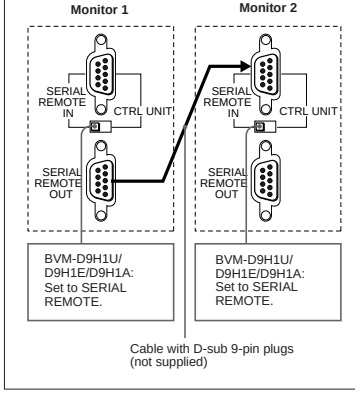
❷ DC 12V IN jack (XLR-type, 4-pin)
Connects the DC 12V external power source to use the monitor.

❸ EJECT button
While sliding this button, remove the AC adaptor or battery.

❹ AC adaptor/battery attachment place
Attach the AC adaptor or battery.

❺ SERIAL REMOTE connectors (female, D-sub 9-pin), and SERIAL REMOTE/CTRL UNIT select switch (BVM-D9H1U/D9H1E/D9H1A only)
These are RS-485 serial interface connectors, used for connecting two or more BVM-xxE/F/G, BVM-xxD and HDM-xxE series monitors. The IN and OUT connectors form a loop-through connection.
BVM-D9H1U/D9H1E/D9H1A only: The SERIAL REMOTE/CTRL UNIT select switch is set to SERIAL REMOTE at the factory.

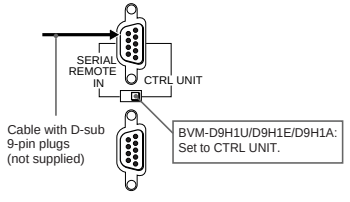
For connecting the monitor (used for daisy chain connections)
Connect two monitors using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as follows:



(continued)

For connecting the BKM-10R Monitor Control Unit

Connect the monitor and control unit using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as follows:



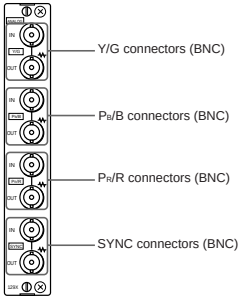
❻ Input option slots (three slots)

The monitor may be fitted with optional input adaptors up to three.
The BKM-129X is installed to the monitor at the factory.

Notes

- The BKM-142HD uses two input option slots.
- Each adaptor can also be installed into SLOT 1. Install any adaptor to SLOT 1.

❼ Analog input/output connectors (BKM-129X)



RGB signals or component signals (Y/P_B/P_R) can be fed in the IN connectors. The type of signal applied to each connector is set with the INPUT CONFIG menu. The OUT connectors are used for loop-through output of the input signal.

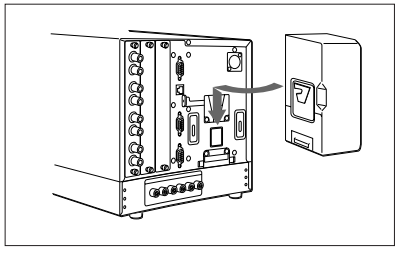
For information about the INPUT CONFIG menu, see " C *Setting the Input Configuration — INPUT CONFIG Menu" on page 35(E).*

❽ AUDIO IN/OUT (input/output) jacks (BVM-D9H5U/D9H5E/D9H5A only)

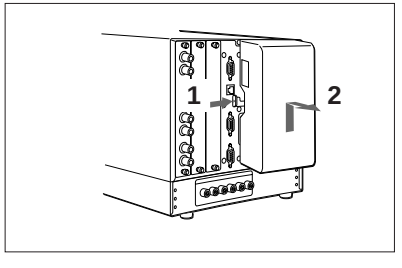
Connects to the audio output jacks of the VCR or microphone amplifier. The monitor is equipped with three input and output jacks. You can obtain the loop-through output from the OUT jacks.

Attaching the AC adaptor or battery

Attaching



Removing the AC adaptor or battery

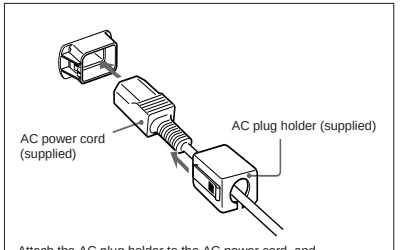


Note

Use the supplied AC adaptor for the BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A models only. It is dangerous to use the AC adaptor for models other than these.

Connecting the AC power cord

Attach the AC adaptor to the monitor, and then connect the supplied AC power cord.

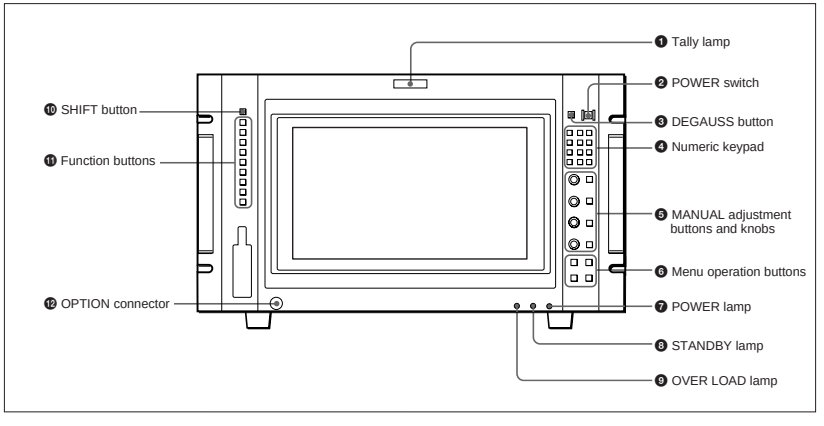


Attach the AC plug holder to the AC power cord, and connect it to the AC IN connector so that the cord does not come loose.

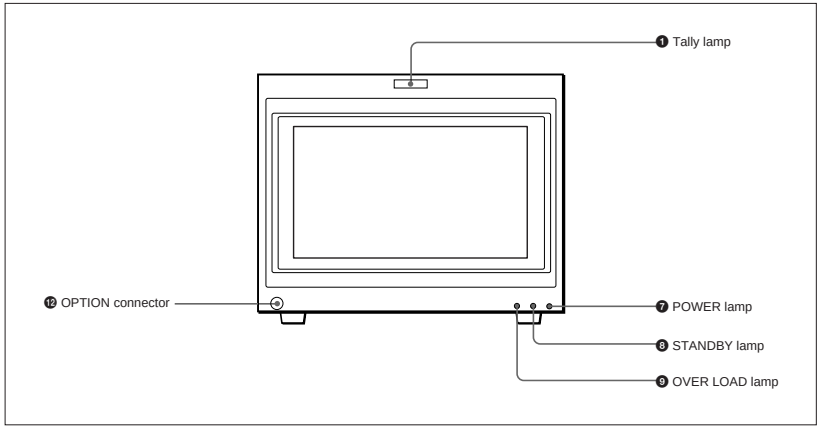
Location and Function of Parts

BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A Front Panel

BVM-D14H5U/D14H5E/D14H5A



BVM-D14H1U/D14H1E/D14H1A



This manual explains the location and function of parts and controls of the BVM-D14H5U/D14H5E/D14H5A. The explanation also applies to the optional BKM-10R/11R Monitor Control Unit.

❶ Tally lamp
With factory settings, the tally lamp lights as follows when the pins of the PARALLEL REMOTE 1 connector on the rear panel are shorted:
– in red, when pins No.3 and No.9 are shorted.
– in green, when pins No.4 and No.9 are shorted.
– in amber, when pins No.3, No.4 and No.9 are shorted.

The tally lamp lights as follows when the pins of the PARALLEL REMOTE 2 connector on the rear panel are shorted:
– in red, when pins No.3 and No.5 are shorted.
– in green, when pins No.4 and No.5 are shorted.
– in amber, when pins No.3, No.4 and No.5 are shorted.

By changing the setting in the REMOTE menu, different pins on the remote connector can be used to control the tally lamp.

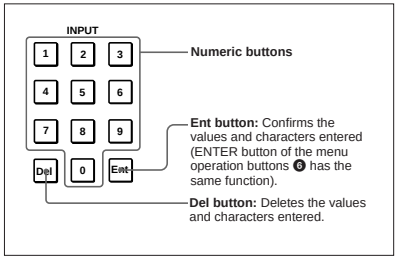
For information about the REMOTE menu, see "D Assigning the Remote Control Functions — REMOTE Menu" on page 37(E).

❷ POWER switch
Press to turn on/off the monitor. By setting with the ADDRESS menu, it is possible to turn on/off the power of the specified monitors only, or of all monitors at the same time.

For information about the ADDRESS menu, see "Selecting the Monitor to Control — ADDRESS Menu" on page 45(E).

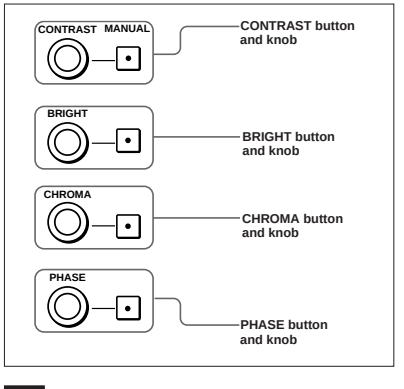
❸ DEGAUSS button
Press to degauss the CRT (every time the monitor is turned on, the CRT is degaussed automatically). To degauss again, wait for more than five minutes.

❹ Numeric keypad
Use to designate the channel number for the input signal to be monitored, or to enter the setting values with the menus.



❺ MANUAL adjustment buttons and knobs
Each press of one of these buttons turns the button's green LED on or off. When the corresponding button is on (lit), it is possible to manually adjust the contrast, brightness, chroma and phase by turning the corresponding knobs. The PHASE knob is also used to enter the setting values with the menus. It is possible to set the preset value for each adjusting item with the CONTROL PRESET ADJ menu.

For Information about the CONTROL PRESET ADJ menu, see " A Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ menu" on page 31(E).

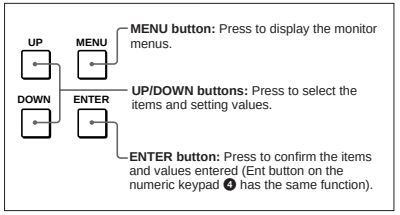


Note
The PHASE and CHROMA knobs may not be adjusted due to the signals. However, these knobs are used for selecting the items or entering the setting values with the menus.

(continued)

Location and Function of Parts

❻ Menu operation buttons



For more information about menu operation, see "Basic Menu Operations" on page 25(E).

❼ POWER lamp

Lights when the monitor is put into operation mode from standby mode (see STANDBY lamp ❽) by pressing the POWER switch ❷.

Note

When the STANDBY lamp ❽ is blinking, the monitor cannot be put into operation mode (internal data initialization is taking place). Wait until the STANDBY lamp ❽ is steadily lit.

❽ STANDBY lamp

Lights when the monitor is in standby mode. The monitor will be in standby mode under the following conditions:

- The MAIN POWER switch (on the rear panel) is turned on when the STANDBY MODE menu of the SYSTEM CONFIG menu is set to ON (the STANDBY lamp will blink for a few moments after the switch is turned on, then will light).
- The monitor is changed from operation mode to standby mode by external control.

For information about the SYSTEM CONFIG menu, see "E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu" on page 39(E).

❾ OVER LOAD lamp

Lights when some malfunction has occured.
When the OVER LOAD lamp is lit, consult your nearest Sony service facilities.

❿ SHIFT button

Press to select one of the two functions designated to the function buttons ⓫.
Each time the SHIFT button is pressed, the LED turns on (SHIFT ON: lits in umber) and off (SHIFT OFF.)

SHIFT OFF: The functions indicated above the function buttons can be used (the LED of the function button lits in green.)

SHIFT ON: The functions indicated below the function buttons can be used (the LED of the function button lits in amber.)

⓫ Function buttons

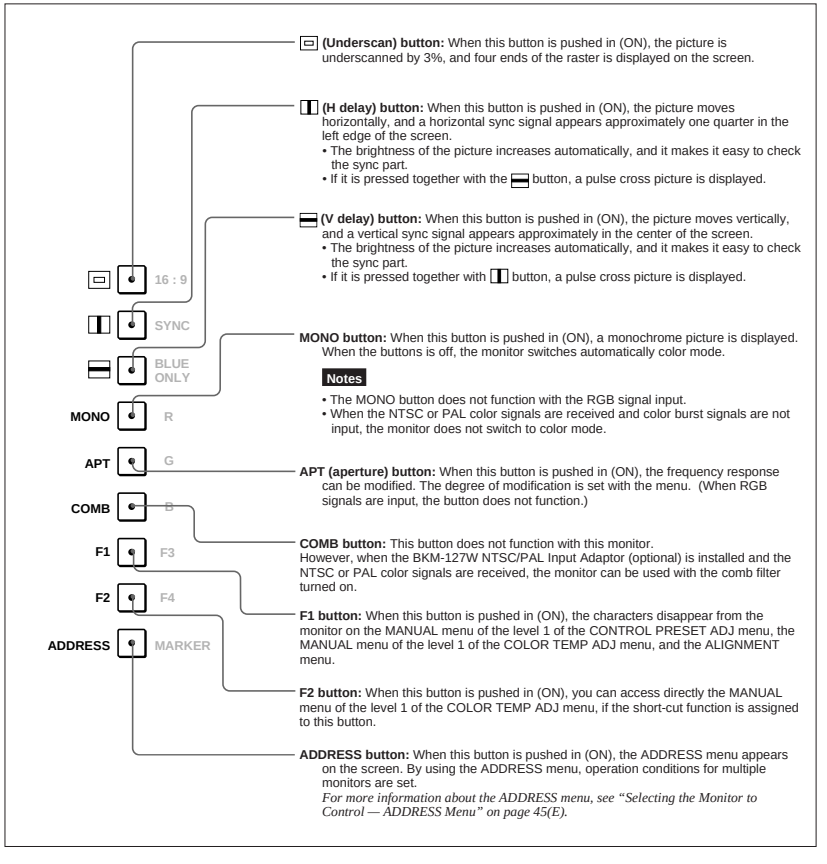
Change the operation conditions for the monitor.
Each time the button is pressed, the LED turns on and turns off, and the operation conditions are changed.
Each button has two functions. Select one of the two functions by pressing the SHIFT button ❿. When the SHIFT button is set to ON, the LED lights in umber, and when the SHIFT button is set to OFF, the LED of each button lights in green.

For the functions of the function buttons in case of SHIFT OFF and SHIFT ON, see pages 19(E) and 20(E).

⓬ OPTION connector

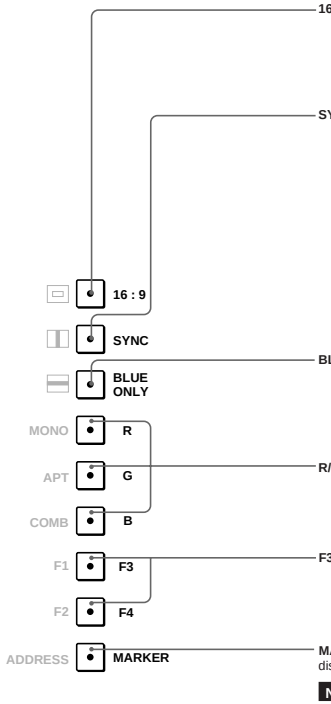
Used to connect the BKM-11R Monitor Control Unit or Auto Setup Probe (BKM-14L, etc.)

Function buttons in SHIFT OFF mode (LEDs of function buttons in green)



Location and Function of Parts

Function buttons in SHIFT ON mode (LEDs of function buttons in amber)



16:9 button: When this button is pushed in (ON), the aspect ratio changes to 16:9, and when set to OFF, the aspect ratio changes to 4:3.
The aspect ratio is fixed to 16:9 when the signal other than 4:3 signal format is input. For details, see "Available Signal Format" on page 53(E).

SYNC button: When this button is pushed in (ON), the monitor synchronizes to the sync signal input to the SYNC connectors on the BKM-129X (EXT SYNC). When set to OFF, it synchronizes to the sync signal included in the signals being monitored (INT SYNC).

Notes

- When INT SYNC is selected, use a component including a sync signal on the Y signal, and use RGB signal including a sync signal on the G signal.
- When the BKM-129X is not installed to the monitor or serial digital signals are monitored, INT SYNC is automatically selected. You cannot select EXT SYNC.

BLUE ONLY button: When this button is pushed in (ON), red and green signals are cut, and only the blue signal is displayed as a monochrome picture. It makes it easy to adjust CHROMA and PHASE, and to check VTR noise.

R/G/B buttons: When these buttons are pushed in (ON), R(red), G(green), and B(blue) beams are cut respectively.

F3/F4 buttons: For future expansion.

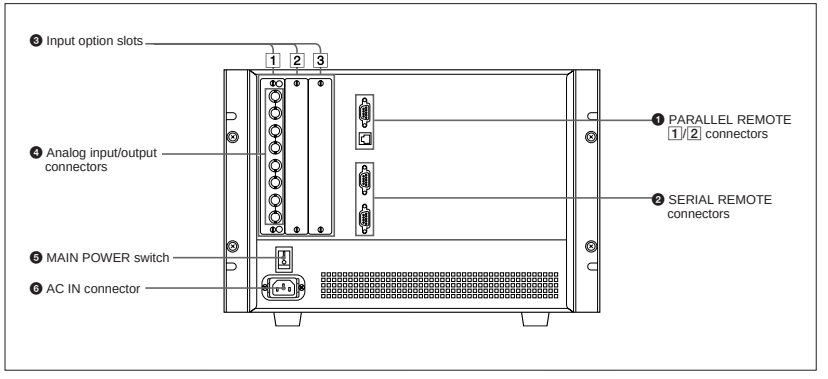
MARKER button: When this button is pushed in (ON), a 4:3 marker is displayed and it is possible to check the 4:3 aspect area in the 16:9 picture.

Note

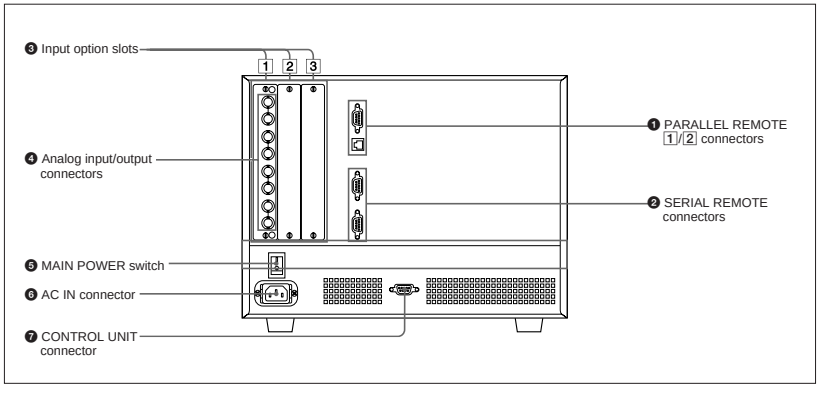
The 4:3 marker is not displayed when the signals of the 4:3 aspect ratio are monitored or the monitor is in H/V delay mode

BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A Rear Panel

BVM-D14H5U/D14H5E/D14H5A



BVM-D14H1U/D14H1E/D14H1A



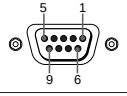
(continued)

Location and Function of Parts

❶ PARALLEL REMOTE 1/2 connectors (1: female, D-sub 9-pin, 2: modular connector)

Form a parallel switch and controls the monitor externally. The pin assignment and factory setting function assigned to each pin are given below.

1: D-sub 9-pin



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	Select sync signal (SYNC button function)
6	Set underscan on or off
7	Set a 16:9 aspect ratio on or off
8	Set the 4:3 area marker display on or off
9	GND

2: modular connector



Pin number	Functions
1	Set input signal channel 1 (numeric keypad function)
2	Set input signal channel 2 (numeric keypad function)
3	Set red tally lamp on or off
4	Set green tally lamp on or off
5	GND
6	Set underscan on or off

All pin function assignments can be changed with the REMOTE menu.

For information about the REMOTE menu, see " D Assigning the Remote Control Functions — REMOTE Menu" on page 37(E).

To switch each function between on and off or between enable and disable, change pin connections in the following way.

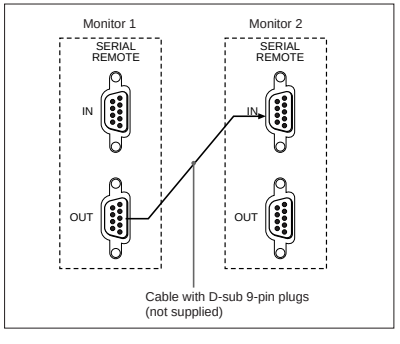
ON or enabled: Short each pin and pin 9 together **for D-sub 9-pin**.
Short each pin and pin 5 together **for modular connector**.

OFF or disabled: Leave each pin open.

❷ SERIAL REMOTE connectors (female, D-sub 9-pin)

These are RS-485 serial interface connectors, used for connecting two or more BVM-xxE/F/G, BVM-xxD and HDM-xxE series monitors.
The IN and OUT connectors form a loop-through connection.

Connect two monitors using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied) as shown in the figure on the next page.



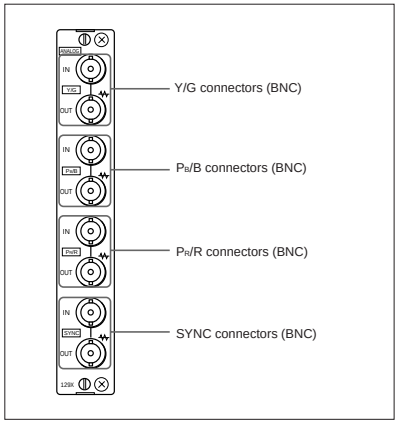
❸ Input option slots (three slots)

The monitor may be fitted with optional input adaptors up to three.
The BKM-129X is installed to the monitor at the factory.

Notes

- The BKM-142HD uses two input option slots.
- Each adaptor can also be installed into SLOT 1. Install any adaptor to SLOT 1.

❹ Analog input/output connectors (BKM-129X)



RGB signals or component signals ($Y/P_B/P_R$) can be fed in the IN connectors. The type of signal applied to each connector is set with the INPUT CONFIG menu. The OUT connectors are used for loop-through output of the input signal.

For information about the INPUT CONFIG menu, see " C Setting the Input Configuration — INPUT CONFIG Menu" on page 35(E).

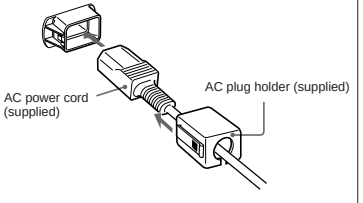
❺ MAIN POWER switch

When turned on, the monitor enters operation mode. By setting in the SYSTEM CONFIG menu, the monitor can also be set to enter standby mode when the MAIN POWER switch is turned on.

For information about the SYSTEM CONFIG menu, see " E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu" on page 39(E).

❻ AC IN connector (3-pin)

Connects the monitor to an AC power source, via the supplied AC power cord.



Attach the AC plug holder to the AC power cord, and connect it to the AC IN connector so that the cord does not come loose.

❼ CONTROL UNIT connector (female, D-sub 9-pin) (BVM-D14H1U/D14H1E/D14H1A only)

Connects a monitor control unit such as the BKM-10R using a cable with D-sub 9-pin plugs such as an RCC-5G (not supplied).

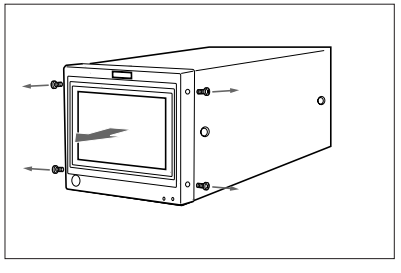
Installation of the 4:3 Mask

When the aspect ratio is switched from 16:9 to 4:3, replace the 16:9 mask with the supplied 4:3 mask.

BVM-D9H1U/D9H1E/D9H1A/ D9H5U/D9H5E/D9H5A

Installing the 4:3 mask

1 Remove four screws from both sides of the monitor and then remove the16:9 mask.



2 Install the 4:3 mask (supplied) and fix both sides with four screws.

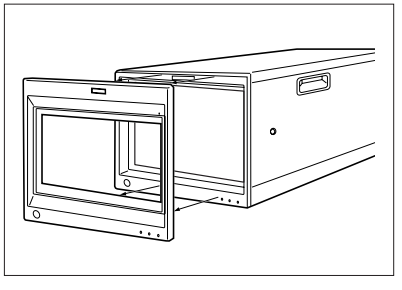
Replacing the 16:9 mask

Remove the 4:3 mask and replace the 16:9 mask using the same procedures as those for installing the 4:3 mask.

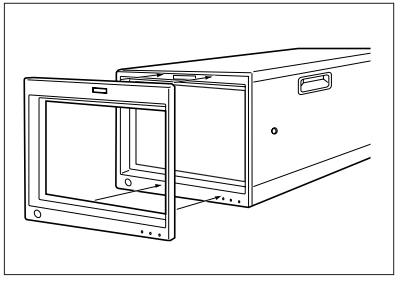
BVM-D14H1U/D14H1E/D14H1A/ D14H5U/D14H5E/D14H5A

Installing the 4:3 mask

1 Remove the 16:9 mask.



2 Install the 4:3 mask (supplied).
① Attach the lower portion of the mask.
② Attach the upper portion of the mask by pressing it until the click.



Replacing the 16:9 mask

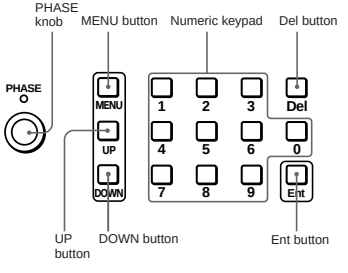
Remove the 4:3 mask and replace the 16:9 mask using the same procedures as those for installing the 4:3 mask.

Basic Menu Operations

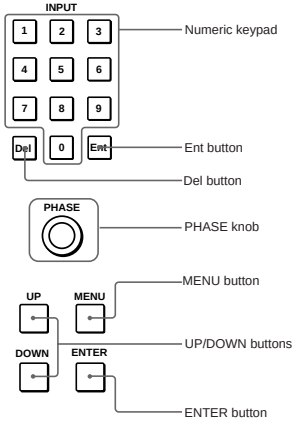
Menu Operation Buttons

The menus are operated using the menu operation buttons on the front panel of the monitor or BKM-10R/11R Monitor Control Unit.

Buttons on the BVM-D9H5U/D9H5E/D9H5A



Buttons on the BVM-D14H5U/D14H5E/D14H5A



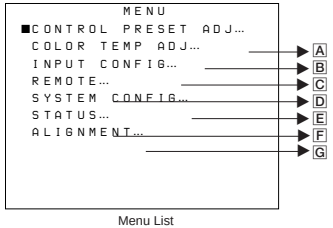
The functions of the menu operation buttons are described below.

Button	Function
UP button	Moves the cursor upward. In setting mode, increases the setting and adjustment values.
DOWN button	Moves the cursor downward. In setting mode, decreases the setting and adjustment values.
MENU button	Displays the Menus. Goes back to the menu of the upper level (on the Main Menu, goes back to the normal picture).
ENTER button/ Ent button	Executes the items selected and settings.
PHASE knob	By turning this knob clockwise, the cursor moves upward. In setting mode, increases the setting and adjustment values (has the same function as UP button). By turning this knob counterclockwise, the cursor moves downward. In setting mode, decreases the setting and adjustment values (has the same function as DOWN button).
Numeric keypad	Enters the numerical values.
Del button	Deletes the values and characters entered.

Basic Menu Operations

Displaying the Menus

Press the MENU button.
The menu list is displayed on the screen.



Menu List

When you select one item on the main menu, the level 1 menu corresponding to the selected item on the main menu appears.

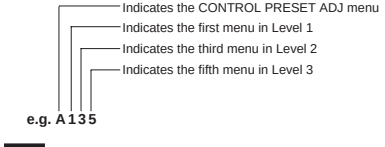
For information about the items on the main menu, see "Menu Structure" on page 30(E).

Note

Menu settings that cannot be changed are displayed in blue.

About menu numbers

For purposes of explanation in this manual, each menu is preceded by menu numbers. The alphabet determines the classification of menus on the Menu List (Main Menu), and the numbers determine the level and the order. These menu numbers are not shown on the screen.



Note

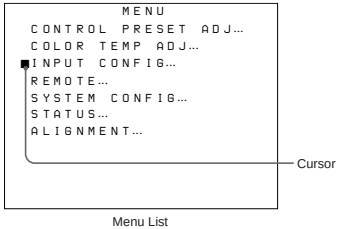
Only the menus which require explanation are preceded by menu numbers. Thus, the menu number is counted without menus which do not require explanation.

Menu Operation

Follow the steps described below to display the menu and perform the adjustment or setup you wish.

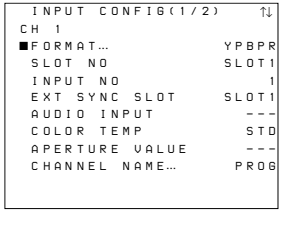
1 Press the MENU button.
The Menu List is displayed.

2 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item. (Example: select the INPUT CONFIG menu by pressing the DOWN button.)



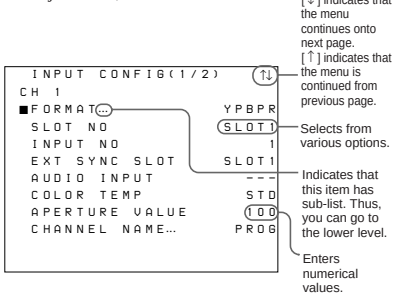
Menu List

3 Press the ENTER button or Ent button.
The Level 1 of the selected menu is displayed.



(continued)

4 Repeat steps **2** and **3** until the desired menu is displayed.
For more information about setting and adjustments, see below.



To abort menu operation

Press the MENU button. The menu of the upper level is displayed.
The setting or adjustment being performed is canceled, and data loading or saving is aborted.

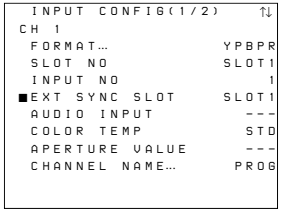
If "NG" or "ERROR" appears during menu operation

Press the MENU button to return to the menu in use.

Choosing one of two or more selections

Selecting in setting mode

1 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item and press the ENTER or Ent button.
The selected item is displayed in yellow text and set to setting mode.

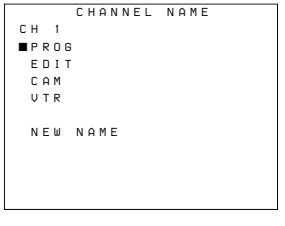


2 Using the UP/DOWN buttons or PHASE knob, change the setting.

3 Press the ENTER or Ent button.
The setting is confirmed (The item is displayed in white text again).

Selecting from the setting list

1 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item in the setting list.



2 Press the ENTER or Ent button.
The display returns to the menu of the upper level, and the selected setting is executed.

Entering a numerical value

1 Using the UP/DOWN buttons or PHASE knob, move the cursor to the desired item and press the ENTER or Ent button.
The selected item is displayed in yellow text and set to setting mode.

```
  INPUT CONFIG(1/2)      ↑↓
CH 1
 FORMAT…              YPBPR
 SLOT NO              SLOT1
 INPUT NO                 1
 EXT SYNC SLOT        SLOT1
 AUDIO INPUT            ---
 COLOR TEMP             STD
■APERTURE VALUE         100
 CHANNEL NAME…         PROG
```

2 Set the value in one of the following three ways:
- Enter the value directly using the numeric keypad and press the ENTER or Ent button
- Select the value using the UP/DOWN buttons
- Select the value using the PHASE knob

3 Press the ENTER or Ent button.
The setting is confirmed (The item is displayed in white text again).

Entering characters

1 Display the setting menu and set the cursor to NEW NAME using the UP/DOWN buttons or PHASE knob.

```
      CHANNEL NAME
CH 1
 PROG
 EDIT
 CAM
 VTR

■NEW NAME
```

2 Press the ENTER or Ent button.
"?" is displayed in yellow. The "?" indicates the position where character input is possible.

```
      CHANNEL NAME
CH 1
 PROG
 EDIT
 CAM
 VTR

■NEW NAME
 ?
```

3 Select the character you wish to enter using the UP/DOWN buttons or PHASE knob.
When you press the UP button, or turn the PHASE knob clockwise, the characters and symbols appear in the order shown below.

A B .....Y Z 0 1 .....8 9 (,) : ; . - + / & (space) ?

If you press the UP/DOWN button or turn the PHASE knob counterclockwise, the characters and symbols appear in the reverse order described above.

4 Press the ENTER or Ent button.
The selected character is entered.

```
      CHANNEL NAME
CH 1
 PROG
 EDIT
 CAM
 VTR

■NEW NAME
 C?
```

5 Repeat steps **3** and **4** until all the characters are entered, then press the ENTER or Ent button.
The selected characters are confirmed, and the display returns to the menu of the previous level.

To correct the entered character

Press the Del button on the numeric keypad. The character on the left side of the "?"(in yellow) is deleted.

ADDRESS Menu

In addition to the menus displayed on the menu list, the ADDRESS menu is provided. This ADDRESS menu is used to select the monitor or the monitor group, so that when several monitors are connected together via serial remote ports, the control panel can select which monitor to control.
To display or exit the ADDRESS menu, press the ADDRESS button. The method of choosing menu items and changing settings is the same as with the other menus.

For information about the ADDRESS menu, see "Selecting the Monitor to Control —ADDRESS Menu" on page 45(E).

Menu Structure

Menus consist of one to three levels.

Detailed information on the levels of menus is described at the top of explanation of each menu.

	Main Menu	Functions
A	**CONTROL PRESET ADJ menu**	Sets the preset values for the input signal's chroma, contrast, phase, and brightness. (page 31(E))
B	**COLOR TEMP ADJ menu**	Sets the color temperature. (page 33(E))
C	**INPUT CONFIG menu**	Sets the input channel. (page 35(E))
D	**REMOTE menu**	Sets the remote control functionality. (page 37(E))
E	**SYSTEM CONFIG menu**	Sets the power-up conditions and data about the screen display. (page 39(E))
F	**STATUS menu**	Displays the information about the monitor or options installed in the monitor. (page 42(E))
G	**ALIGNMENT menu**	Adjusts the position, size and geometry of the picture. (page 43(E))

A Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ Menu

Overview

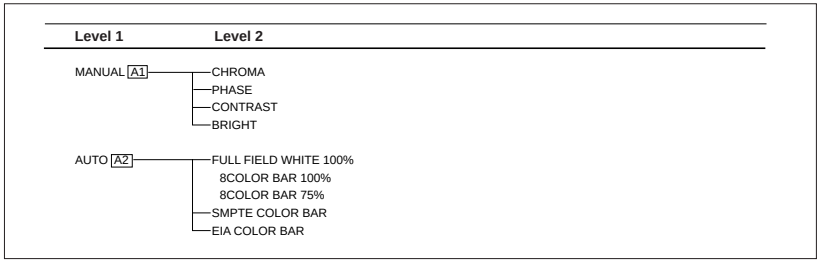
The preliminary adjustments of chroma, phase, contrast and brightness are carried out with the CONTROL PRESET ADJ menu to set the preset values to the knobs for the above-mentioned adjustments.

Preset values can be set in the following two ways:
- **Adjustment with the MANUAL adjustment knobs (MANUAL menu)**
- **Automatic adjustment (AUTO menu)**
  An external color bar signal is necessary.

Note

After installing the optional board, carry out AUTO adjustment.

Structure of the CONTROL PRESET ADJ Menu



Setting Lists in the CONTROL PRESET ADJ Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇨) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

http://getMANUAL.com

A Preset Adjustment of the Picture Level Control Knobs — CONTROL PRESET ADJ Menu

A CONTROL PRESET ADJ menu
Select the setting method.
MANUAL... : Set with the MANUAL adjustment knobs. ⇨A1
AUTO... : Set by automatic adjustment. ⇨A2

A1 MANUAL menu
Adjust values by turning the CHROMA, PHASE, CONTRAST, and/or BRIGHT knobs. After the adjustment, press the ENTER or Ent button to confirm the adjusted values.
The setting value is 0 to 200.
CHROMA: xxx
PHASE: xxx
CONTRAST: xxx
BRIGHT: xxx

When you want to erase characters from the screen while adjusting manually
Press the F1 button. The characters disappear. To display characters, press the F1 button again.

To reset the setting to the default
Press the corresponding MANUAL adjustment button (BVM-D14H5U/D14H5E/D14H5A) or knob (BVM-D9H5U/D9H5E/D9H5A.) The adjusted value is reset to 100 (default).

A2 AUTO menu
You can adjust the CHROMA and PHASE levels automatically. Input the color bar signals to the board to be adjusted and select the required color bar signals.
⇨Adjustment is carried out.
8COLOR BAR 100%: 100% full-field 8-color bar (white, yellow, cyan, green. magenta, red, blue, black)
8COLOR BAR 75%: 75% full-field color bar (with 100% white signal)
SMPTE COLOR BAR: SMPTE standard color bar
EIA COLOR BAR: EIA standard color bar

Note
When you execute the AUTO menu, SYNC button should be set to OFF (INT SYNC).
EXT SYNC will cause an error abortion of auto adjustment procedure.

B Adjusting the Color Temperature — COLOR TEMP ADJ Menu

Overview

The monitor can memorize the data for up to three color temperatures (STD, COL1, COL2.) The data for each color temperature is adjusted with the COLOR TEMP ADJ menu. The data of the color temperature selected in the INPUT CONFIG menu is adjusted. Color temperature adjustment can be made in the following three ways:

- **Knob adjustment (MANUAL menu)**
  You can adjust the color temperature with the bias and gain knobs.
- **Automatic adjustment using a probe (PROBE menu)**
  You can use the following probes for automatic adjustment of color temperature. Except for the Sony BKM-14L, a cable is required to connect the color analyzer to the monitor.

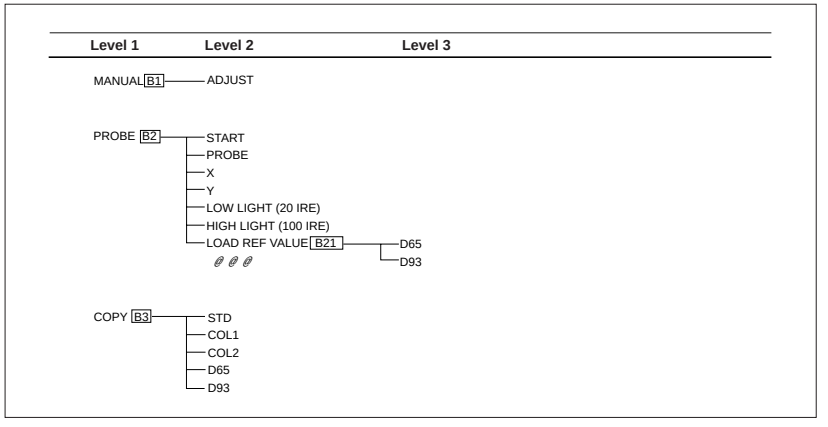
Manufacturer	Probe Model Name
SONY	BKM-14L (no cable required)
GRASEBY	SLS 9400
MINOLTA	CA-100
PHILIPS	PM 5639
THOMA	TF6

For more information about the cable specification required and about the connection, see "Connection Cable Specifications for Color Temperature Probes" on page 54(E).

Notes
- The CRT size of the BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A is small. So, when a probe other than the Sony BKM-14L is used, use the probe closely to the CRT screen.
- After the color temperature is adjusted by automatic adjustment, carry out the AUTO adjustment of the CONTROL PRESET ADJ menu (AUTO CHROMA PHASE adjustment.)

- **Copying other color temperature data (COPY menu)**
  You can copy the memorized color temperature data (STD/COL1/COL2/D65/D93.) Use the factory setting value or the adjusted value as an original value to shorten the adjustment time.

Structure of the COLOR TEMP ADJ Menu



B Adjusting the Color Temperature — COLOR TEMP ADJ Menu

Setting Lists in the COLOR TEMP ADJ Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇨) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

B COLOR TEMP ADJ menu

Select the adjustment method.
MANUAL... : Set with the MANUAL adjustment knob. ⇨B1
PROBE... : Set using a probe. ⇨B2
COPY... : Copy data from elsewhere. ⇨B3

B1 MANUAL menu

Adjust the gain and bias with the MANUAL adjustment knob.
ADJUST... : Adjust the gain and bias. To shift between gain adjustment and bias adjustment, press UP/DOWN buttons. Use appropriate knobs in each adjustment as described below. After the adjustment, press the ENTER or Ent button to confirm the adjusted values.
RED: CONTRAST KNOB (Adjust the R gain or bias with the CONTRAST knob.)
GREEN: BRIGHT KNOB (Adjust the G gain or bias with the BRIGHT knob.)
BLUE: CHROMA KNOB (Adjust the B gain or bias with the CHROMA knob.)
LUMINANCE: PHASE KNOB (Adjust luminance with the PHASE knob.)

To reset RED/GREEN/BLUE to the value before adjustment

When you are adjusting the gain or bias using the MANUAL adjustment knobs, you can reset the setting to the one before adjustment by pressing the corresponding MANUAL adjustment button (BVM-D14H5U/D14H5E/D14H5A) or knob (BVM-D9H5U/D9H5E/D9H5A).
To reset all of settings at the same time, press the PHASE button or knob.

Note

You cannot reset the setting after you press the ENTER or Ent button.

To access the MANUAL menu directly

When the F2 button is assigned as the short-cut key to the MANUAL menu, you can directly access the MANUAL menu that corresponds to the color temperature setting (STD/COL1/COL2) set to the image on the screen.
For details of how to assign the short-cut key, see "E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu" on page 39(E).

B2 PROBE menu

Select the probe for color temperature adjustment.
START: Start adjustment.
PROBE: Select the probe.
X: Enter the x coordinate.
Y: Enter the y coordinate.
LOW LIGHT (20IRE): Enter the luminance (cd/m^2) for low light.
HIGH LIGHT (100IRE): Enter the luminance (cd/m^2) for high light.
LOAD REF VALUE: Select the standard settings of the x and y coordinates. ⇨B21

B21 LOAD REF VALUE

Select one of the followings:
D65: Use D65 setting (x and y coordinates and standard luminance).
D93: Use D93 setting (x and y coordinates and standard luminance).

B3 COPY menu

Select one of followings: ⇨ The current data, which is used for adjusting, is copied.
STD: Copy STD data (factory setting: D65).
COL1: Copy COL 1 data (factory setting: D93).
COL2: Copy COL 2 data (factory setting: D65).
D65: Copy the color temperature of D65.
D93: Copy the color temperature of D93.

Note

The current data which is used for adjusting (selected in the INPUT CONFIG menu) is displayed in blue letters and you can not select it.

C Setting the Input Configuration — INPUT CONFIG Menu

Overview

You can set up to nine input channels.
Data pertaining to the input signals are set with the INPUT CONFIG menu.
When a channel number (1 to 9) is entered with the numeric keypad, it is then possible to set which input connector on the rear panel will be assigned to that channel number, and select the type of signal that will be connected.

Assigning slot and connector numbers

Set which input connector on which slot will be assigned to the current channel.

Assigning the signal type and format

The signal type and format which can be assigned to each channel number vary, depending on what adaptors are installed in the rear panel.

To assign D1 serial digital signals

Serial digital signals can be assigned to the slot where the BKM-120D is installed.

To assign analog composite signals

Analog composite signals can be assigned to the slot where the BKM-127W is installed.

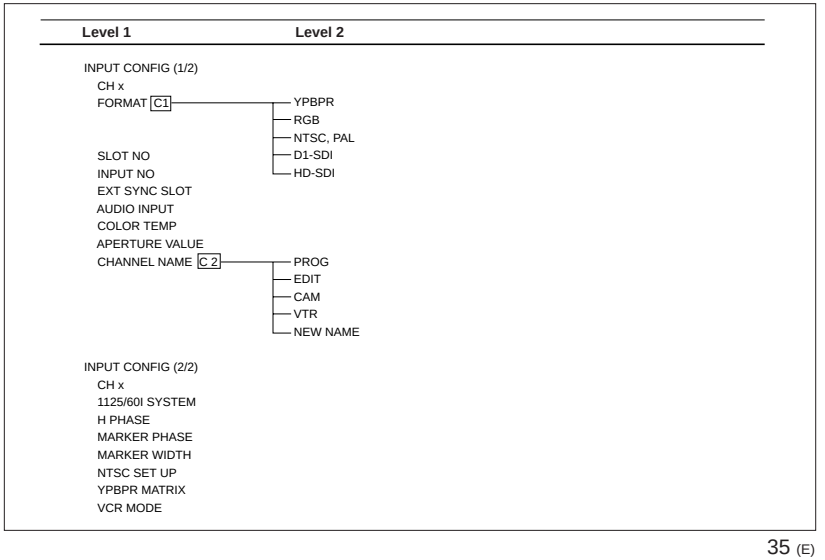
To assign HD serial digital signals

HD serial digital signals can be assigned to the slots where the BKM-142HD is installed.

To assign analog component or RGB signals

Analog component or RGB signals can be assigned to the slot where BKM-129X is installed.

Structure of the INPUT CONFIG Menu



C Setting the Input Configuration — INPUT CONFIG Menu

Setting Lists in the INPUT CONFIG Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇨) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

C (1/2) INPUT CONFIG (1/2) menu

Set input signal data for each channel.

CH x: Current channel is indicated. To change the channel, enter a channel number with the numeric keypad. The settings below will be stored as information of this channel.
FORMAT... : Select the input signal type. ⇨C1
SLOT NO: Select the slot number.
INPUT NO: Select the input connector number.
EXT SYNC SLOT: Select the slot when the external sync signal is used.
AUDIO INPUT (BVM-D9H5U/D9H5E/D9H5A only): Select the audio input number.
COLOR TEMP: Select the color temperature.
APERTURE VALUE: Enter the aperture adjustment value (0 to 200).
CHANNEL NAME: Give the channel a name. ⇨C2

C (2/2) INPUT CONFIG (2/2) menu

Set input signal data for each channel.

CH x: Current channel is indicated. To change the channel, enter a channel number with the numeric keypad. The settings below will be stored as information of this channel.
1125/60I SYSTEM: Select the number of active scanning lines per frame for 1125/60I input signals. When the HD SDI signal is input, the number of active scanning lines is selected automatically.
1035: The active scanning lines are 1035 lines.
1080: The active scanning lines are 1080 lines
H PHASE: Set the horizontal picture position (–128 to +127).
MARKER PHASE: Set the 4:3 marker position.
MARKER WIDTH: Set the 4:3 marker width.
NTSC SET UP: Set the setup level when the BKM-127W is installed. SETUP 7.5 or 0.
YPBPR MATRIX: Select the matrix when YP_BP_R signals of the signal format 480/60I or 480/60P (TV lines 525) are input.
VCR MODE: Compensate for a distorted picture when the input signals from the VCR are not typical. This mode is effective when the signal formats 480/60I or 575/50I are input.
ON: Operates when the signal formats 480/60I or 575/50I are input.
OFF: Does not operate.

C1 FORMAT menu

Select the signal format.

YPBPR: Select the component signals when the BKM-129X is installed. SPMTE, BETACAM 7.5 or 0.
RGB: Select when the BKM-129X is installed.
NTSC, PAL: Selects when the BKM-127W is installed.
D1-SDI: Select when the BKM-120D is installed.
HD-SDI: Select when the BKM-142D is installed.

C2 CHANNEL NAME menu

Give the channel a name. Enter a name after a preset one or a new one.

PROG: Program signal.
EDIT: Signal from an editor.
CAM: Camera signal.
VTR: Signal from a VTR.
NEW NAME: Enter a new name. (Up to 20 characters can be entered and up to six characters from the head of the name are displayed in the INPUT CONFIG menu (C 1/2).)

D Assigning the Remote Control Functions — REMOTE Menu

Overview

The remote control functions are set with the REMOTE menu. With this monitor, both serial remote control (SERIAL REMOTE) and parallel remote control (PARALLEL REMOTE) are possible.

- **Settings for the serial remote control (SERIAL REMOTE)**
  An address number (MONITOR ADDRESS) and group number (GROUP ADDRESS) can be assigned to the monitor connected to the SERIAL REMOTE connector.
- **ON/OFF setting for the parallel remote control (PARALLEL REMOTE)**
- **Settings for the parallel remote control (PARALLEL REMOTE)**
  Functions can be assigned to the pins of the PARALLEL REMOTE connector.

Priority order of the remote control functions

It is possible to simultaneously use the BKM-10R/11R Monitor Control Unit, SERIAL REMOTE, and PARALLEL REMOTE for control, but commands from PARALLEL REMOTE have priority. Therefore, it is impossible for the BKM-10R/11R or SERIAL REMOTE to change items set by PARALLEL REMOTE.
There is no priority order between commands from SERIAL REMOTE and the BKM-10R/11R control panel.

PARALLEL REMOTE 1 and 2 are connected parallel inside the unit, therefore, there is no priority order between them.

About monitor address and group numbers

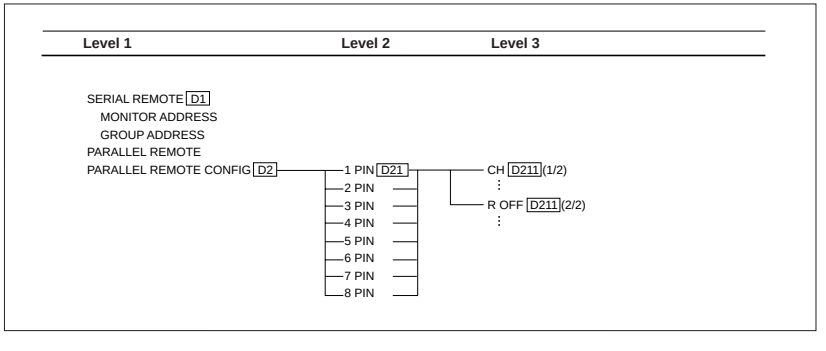
It is possible to control up to 32 monitors connected via serial remote connector (using the SERIAL REMOTE connector). By giving each monitor a monitor address and group number, it is possible to control just a specific monitor or monitor group.
With the SERIAL REMOTE menu, each monitor can be set with a monitor address and group number, between 1 and 99.
The ADDRESS menu is used to control the monitors which are connected by the serial remote connectors.

For information about the ADDRESS menu, see "Selecting the Monitor to Control — ADDRESS Menu" on page 45(E).

Note

The address number must differ from one monitor to another. If two or more monitors have the same address number, an operation error occurs.

Structure of the REMOTE Menu



D Assigning the Remote Control Functions — REMOTE Menu

Setting Lists of the REMOTE Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇨) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

D REMOTE menu

Select the type of remote control.

SERIAL REMOTE : Set the address and group number of the monitor controlled via the SERIAL REMOTE connector. ⇨D1

PARALLEL REMOTE: Select whether parallel remote control will be used or not (ON or OFF.)

PARALLEL REMOTE CONFIG : Set the pin assignments for the PARALLEL REMOTE connector. ⇨D2

D1 SERIAL REMOTE menu

Set the monitor address and group number.

MONITOR ADDRESS: Enter a number.

GROUP ADDRESS: Enter a number.

D2 PARALLEL REMOTE CONFIG menu

Select the PARALLEL REMOTE connector pins for which you want to change the function. The factory settings for each pin are given below. ⇨D211

PINs 1 to 4, and PIN 6 of the PARALLEL REMOTE 1 and 2 are common settings.

1 PIN: CH01
2 PIN: CH02
3 PIN: TALLY RED
4 PIN: TALLY GREEN
5 PIN: EXT SYNC (PARALLEL REMOTE 1)
GND (PARALLEL REMOTE 2)
6 PIN: UNDERSCAN
7 PIN: 16:9
8 PIN: 4:3 MARKER

Note

PINs 1 to 4, and PIN 6 of the PARALLEL REMOTE 1 and 2 are connected inside the unit, therefore different functions cannot be assigned to those pins.

D211 (1/2) 1-8 PIN menu (1/2)

Assign a function to the selected pin.

CH: Select a channel number. Enter the desired channel number with the numeric keypad.
----: Set to unused.
UNDER SCAN: Set underscan on or off.
16:9: Set a 16:9 aspect ratio on or off.
H DELAY: Set the horizontal sync display on or off.
V DELAY: Set the vertical sync display on or off.
EXT SYNC: Set the synchronization to external sync signals enabled or disabled.
APERTURE: Set the correction of frequency characteristics enabled or disabled.
MONO: Set monochrome display on or off.
BLUE ONLY: Set the blue signal pictures display (monochrome) on or off.

D211 (2/2) 1-8 PIN menu (2/2)

Assign a function to the selected pin.

R OFF: Set cutting red beams enabled or disabled.
G OFF: Set cutting green beams enabled or disabled.
B OFF: Set cutting blue beams enabled or disabled.
4:3 MARKER: Set the 4:3 marker display on or off.
CAPTION VISION: Set Caption Vision on or off.
TALLY RED: Set tally red on or off.
TALLY GREEN: Set tally green on or off.
DEGAUSS: Set degaussing on or off.
POWER OFF: Set the monitor power on or off.

For the pin assignment, see "PARALLEL REMOTE 1/2 connectors" in the Location and Function of Parts on page 13(E) for BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A or page 22(E) for BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A.

E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu

Overview

The SYSTEM CONFIG menu is displayed on the two pages.
The SYSTEM CONFIG (1/2) menu is used for the following settings:

- **Power-up condition (STANDBY MODE menu)**
  This menu sets the condition of the monitor when the MAIN POWER switch on the rear panel is switched on (BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A) or when the battery is installed (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A.)
- **Power-up input channel (DEFAULT CH menu)**
  This menu sets the power-up input channel.
- **Time from power-up until degauss (DEGAUSS DELAY menu)**
  If several monitors are turned on at the same time and all start degaussing at the same time, there will be a very large current draw on the power supply for a few moments. To prevent this, the delay time between power-up and degaussing can be set for each monitor independently.
- **Setting of the contrast and brightness after adjusting the white balance (CONT/BRT HOLD menu)**
  Selects if the adjusted contrast and brightness are retained or they are reset to the center values, when the color temperature is adjusted in the COLOR TEMP ADJ menu.
- **Assigning shortcut to the COLOR TEMP ADJ menu to the F2 key (COL TEMP SHORT-CUT menu)**
  Assigns the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu to the F2 key. This allows you to jump directly to the MANUAL menu corresponding to the color temperature set to the currently displayed image (STD/COL 1/COL 2.)
- **Auto color control (ACC SW menu) (when using the BKM-127W)**
  Selects if the ACC (Auto Color Control) circuit is turned on or off.
- **Selecting the monitor to copy the original data (CONFIG COPY menu)**
  Setting data of the INPUT CONFIG and SYSTEM CONFIG (except the DEGAUSS DELAY data) menus can be copied from the serial connected monitor.

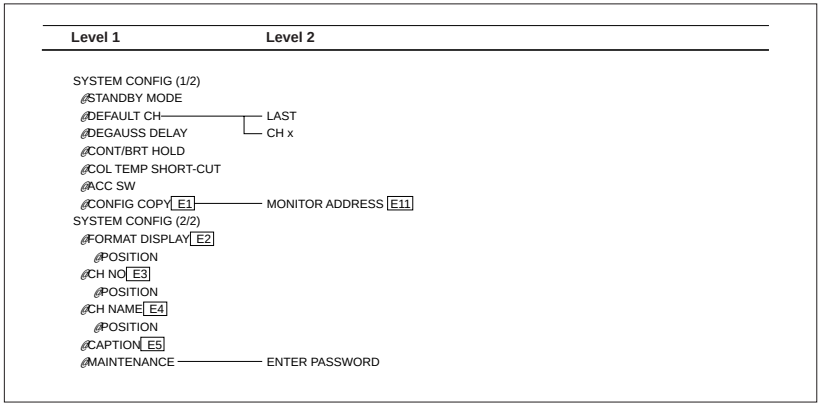
The SYSTEM CONFIG (2/2) menu is used for the following settings:

- **Display mode and position of the signal format (FORMAT DISPLAY and POSITION menus)**
- **Display mode and position of the channel number (CH NO and POSITION menus)**
- **Display mode and position of the channel name (CH NAME and POSITION menus)**
- **Display mode of the caption (CAPTION menu)**

- **Maintenance (MAINTENANCE menu)**
  This is for a service qualified personnel.

E Setting the Power-Up Conditions and Data about the Screen Display — SYSTEM CONFIG Menu

Structure of the SYSTEM CONFIG Menu



Setting Lists of the SYSTEM CONFIG Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇨) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.
- The factory setting is shown in the brackets.

E (1/2) SYSTEM CONFIG (1/2) menu

Set each of the following items.

STANDBY MODE: Select the power-up condition when the MAIN POWER switch is turned on (BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A) or when the battery is installed (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A.)
ON: Standby mode
[OFF]: Operation mode

DEFAULT CH: Select the power-up input channel (LAST or CH x).
[LAST]: Set the channel to the channel that was selected at the time the power was last turned off.
CH x: Set the channel to a specific channel number.

DEGAUSS DELAY: Set the time between power-up and the beginning of degaussing. Enter the desired time (in seconds, 0 to 255).

CONT/BRT HOLD: Select the contrast and brightness settings to the center or adjusted value after adjusting the white balance or auto adjustment of CONTROL PRESET ADJ (OFF or ON).
ON: The contrast and brightness are set to the value before adjusting.
[OFF]: The contrast and brightness are set to the center value (100) after adjusting.

COL TEMP SHORT-CUT: Assign the shortcut function to the MANUAL menu of the COLOR TEMP ADJ menu to F2 key (OFF or F2).
F2: Assigns the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu.
[OFF]: Does not assign the shortcut to the MANUAL menu of the COLOR TEMP ADJ menu.

ACC SW: Set the automatic color control switch (OFF or ON).

CONFIG COPY...: Copy setting data of the INPUT CONFIG and SYSTEM CONFIG (except the DEGAUSS DELAY data) menus from the serial connected BVM-D9H/D14H monitor. ⇨E11

E11 MONITOR ADDRESS menu

Set the address number of the monitor to be copied.

E (2/2) SYSTEM CONFIG (2/2) menu

Select items to be displayed on the screen.

FORMAT DISPLAY: Select the display mode of the signal format. ⇨E2 (2/2)
POSITION: Select the display position of the signal format. ⇨E2 (2/2)

CH NO: Select the display mode of the channel number. ⇨E3 (2/2)
POSITION: Select the display position of the channel number. ⇨E3 (2/2)

CH NAME: Select the display mode of the channel name. ⇨E4 (2/2)
POSITION: Select the display position of the channel name. ⇨E4 (2/2)

CAPTION: Select the caption display mode. ⇨E5 (2/2)

MAINTENANCE...: Menu for service personnel.

E2 (2/2) FORMAT DISPLAY and POSITION menus

FORMAT DISPLAY menu
Select the display mode of the signal format.
[AUTO]: Disappears after displayed for a while.
ON: Displayed.
OFF: Not displayed.

POSITION menu
Select the display position.
[BOTTOM LEFT]
BOTTOM CENTER
BOTTOM RIGHT
TOP LEFT
TOP CENTER
TOP RIGHT

E3 (2/2) CH NO and POSITION menus

CH NO menu
Select the display mode of the channel number.
[AUTO]: Disappears after displayed for a while.
ON: Displayed.
OFF: Not displayed.

POSITION menu
Select the display position.
BOTTOM LEFT
BOTTOM CENTER
[BOTTOM RIGHT]
TOP LEFT
TOP CENTER
TOP RIGHT

E4 (2/2) CH NAME and POSITION menus

CH NAME menu
Select the display mode of the channel name.
[AUTO]: Disappears after displayed for a while.
ON: Displayed.
OFF: Not displayed.

POSITION menu
Select the display position.
BOTTOM LEFT
BOTTOM CENTER
BOTTOM RIGHT
[TOP LEFT]
TOP CENTER
TOP RIGHT

E5 (2/2) CAPTION menu

Select the caption display mode.
[OFF]: Not displayed
CAPTION 1: Displayed in CAPTION 1 mode.
CAPTION 2: Displayed in CAPTION 2 mode.
TEXT 1: Displayed in TEXT 1 mode.
TEXT 2: Displayed in TEXT 2 mode.

F Displaying Information About the Monitor — STATUS Menu

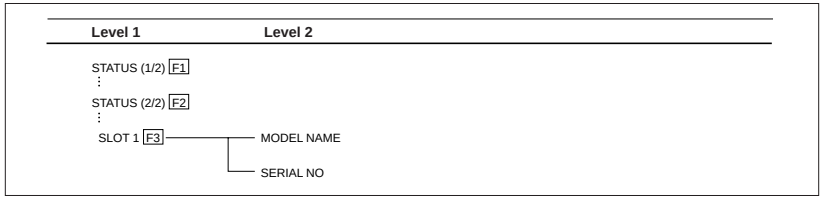
Overview

The STATUS menu is used to view general data about the monitor and information about signals assigned to the slots in the rear panel.

The following information is displayed on the two pages of the STATUS menu.

- **Data about the current channel (STATUS menu (1/2))**
- **Data about the monitor in use and data about the input adaptors installed into the slots on the rear panel (STATUS menu (2/2))**

Structure of the STATUS Menu



Setting Lists of the STATUS Menu

This section explains the setting lists displayed in the menu.

How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).
- The arrow mark (⇨) refers you to another setting list that appears after you make the setting, or to an operation that is carried out as a result of the setting. When there is no arrow mark, the menu does not have any sub-list.

F STATUS menu

Select the STATUS menu 1/2 or 2/2. ⇨F1

F1 STATUS (1/2) menu

Data about the current channel is displayed.
CH: channel number
SL: slot number
IN: input connector number
FORMAT: format of the input signal
NAME: channel name

F2 STATUS (2/2) menu

Data about the monitor is displayed at the upper half of the display.
MODEL NAME: model name
SERIAL NO: serial number
OPERATION TIME: operation time (in hours)
SOFTWARE VERSION: software version

Data about the input adaptors installed into the respective slots in the rear panel is displayed at the lower half of the display.
When the BKM-129X is installed in SLOT 1, the following is displayed. When any optional boards are not installed, EMPTY is displayed for SLOT 2 and SLOT 3.
SLOT1: COMPONENT ⇨F3
SLOT2: EMPTY ⇨F3
SLOT3: EMPTY ⇨F3

F3 SLOT 1 to 3 menu

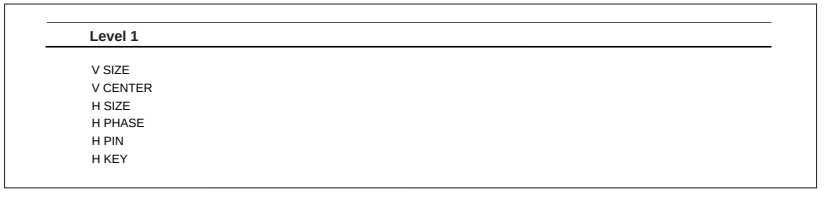
Select the desired slot. Data about the optional board installed in the selected slot is displayed.
MODEL NAME: Model name of that optional board
SERIAL NO: Serial number of that circuit board

G Adjusting the Position, Size and Geometry of the Picture — ALIGNMENT Menu

Overview

The ALIGNMENT menu is used for adjusting the position, size and geometry of the picture.

Structure of the ALIGNMENT Menu



Setting Lists of the ALIGNMENT Menu

This section explains the setting lists displayed in the menu.

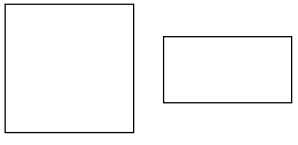
How to read the setting lists

- For purposes of explanation, each setting list is preceded by a menu number. These numbers are not displayed on the screen.
  For more information about the menu number, see "About menu numbers" on page 26(E).

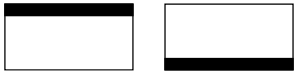
G Adjusting the Position, Size and Geometry of the Picture — ALIGNMENT Menu

G ALIGNMENT menu
Adjust the position, size or geometry of the picture with the UP and DOWN buttons or PHASE knob.

V SIZE: Adjust the height of the picture.



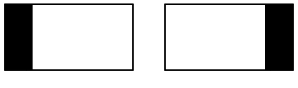
V CENTER: Adjust the vertical picture position.



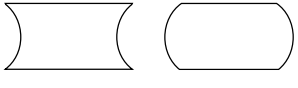
H SIZE: Adjust the width of the picture.



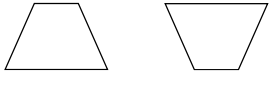
H PHASE: Adjust the horizontal picture position.



H PIN: Correct side pincushion distortion.



H KEY: Correct trapezoid distortion.



(continued)

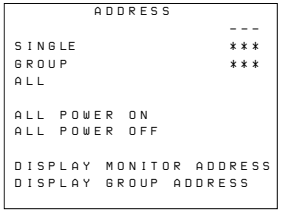
Selecting the Monitor to Control — ADDRESS Menu

Overview

When multiple monitors are connected by a serial remote connection, the ADDRESS menu is used to choose whether one particular monitor or monitor group will be controlled, or whether operations are to be performed on all monitors together.

Displaying the ADDRESS Menu

Press the ADDRESS button.
The ADDRESS menu is displayed on the screen.
By pressing the ENTER or Ent button after selecting the item, serial remote operation becomes activated.



ADDRESS Menu

Settings made with the menu items are as follows:

Item	Function
SINGLE	Controls only a specified monitor. Enter the monitor address number.
GROUP	Controls only a specified monitor group. Enter the group address number.
ALL	Controls all monitors.
ALL POWER ON	Turns all connected monitors on.
ALL POWER OFF	Turns all connected monitors off.
DISPLAY MONITOR ADDRESS	When this item is selected, each connected monitor displays its monitor address on its screen.
DISPLAY GROUP ADDRESS	When this item is selected, each connected monitor displays its group address on its screen.

Notes

- To remotely control monitors connected in serial, MONITOR ADDRESS or GROUP ADDRESS of monitors should be correctly set in the REMOTE menu.
  For details of the REMOTE menu, see "D Assigning the Remote Control Functions – REMOTE Menu" on page 37(E).
  - In GROUP or ALL mode, the LEDs of the function buttons will not light with controlled from the menu. (LEDs light only when you press the function button.)
  - In GROUP or ALL mode, LEDs of controlled monitor will light as follows.
- **In case of SHIFT OFF before remote control operation:** LEDs light in green when the SHIFT button is remotely set to OFF.
  For details, see "SHIFT button" on page10(E) for BVM-D9H5U/D9H5E/D9H5A or on page 19(E) for BVM-D14H5U/D14H5E/D14H5A.
- **In case of SHIFT ON before remote control operation:** LEDs light in amber when the SHIFT button is remotely set to ON.
  For details, see "SHIFT button" on page11(E) for BVM-D9H5U/D9H5E/D9H5A or on page 20(E) for BVM-D14H5U/D14H5E/D14H5A.

Cancelling the Remote Control Mode

To cancel the remote control mode, press the ADDRESS button.

Exiting the ADDRESS Menu

To exit the ADDRESS menu, press the ADDRESS button or the MENU button.

Short-cut Function in the ADDRESS Menu

When selecting the monitor, short-cut function will enable to select the target monitor without using the items in the ADDRESS menu. The operation procedure is as follows.

To select the monitor in the SINGLE mode

1 Press the ADDRESS button.

2 Press the address number of the target monitor.
Press one digit address number on the numeric keypad when it is from 1 to 9.
Press three digits address number (press 0 button and then press the two-digit address number) when it is from 10 to 99.

To select the monitors in the GROUP mode

1 Press the ADDRESS button.

2 Press the F1 button.

3 Press the group number of the target monitor.
Press one digit group address number when it is from 1 to 9.
Press three digits group address number (press 0 button and then press the two-digit group number) when it is from 10 to 99.

To select all the monitors in the ALL mode

1 Press the ADDRESS button.

2 Press the F2 button.

Specifications

General

System 15.625 kHz – 45 kHz
(For details, see "Available Signal Format" on page 53(E).)

CRT

BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A

HR Trinitron, 4:3 aspect ratio
Aperture grille pitch: 0.25 mm
90 degree deflection, 21.6 mm diameter in-line gun
Effective picture size with 16:9 aspect ratio:
155.4 × 87.4 mm (6 1/8 × 3 1/2 inches) (w/h)
178 mm (7 inches) (diagonal size)
Effective picture size with 4:3 aspect ratio:
155.4 × 115 mm (6 1/8 × 4 5/8 inches) (w/h)
190.7 mm (7 1/2 inches) (diagonal size)
CRT protection: EHT (extremely high tension) protection type
Warm-up time: approx. 30 minutes
Anode voltage: 15 kV with no beam current

BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A

HR Trinitron, 4:3 aspect ratio
Aperture grille pitch: 0.25 mm
90 degree deflection, 29.4 mm diameter in-line gun
Effective picture size with 16:9 aspect ratio:
267.5 × 150.5 mm (10 5/8 × 6 inches) (w/h)
306.9 mm (12 1/8 inches) (diagonal size)
Effective picture size with 4:3 aspect ratio:
267.5 × 200.6 mm (10 5/8 × 8 inches) (w/h)
331.6 mm (13 1/8 inches) (diagonal size)
CRT protection: EHT (extremely high tension) protection type
Warm-up time: approx. 30 minutes
Anode voltage: 23 kV with no beam current

Nominal chromaticity coordinates:

EBU phosphor

	x	y
R	0.640	0.330
G	0.290	0.600
B	0.150	0.060

Dimensions (w/h/d)

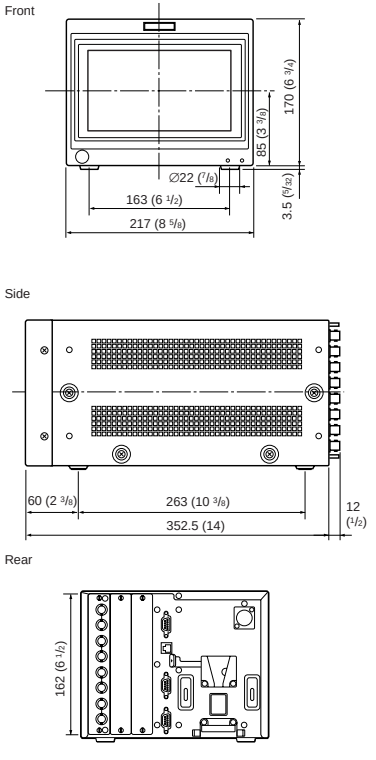
BVM-D9H1U/D9H1E/D9H1A:
approx. 217 × 174 × 364.5mm (8 5/8 × 6 7/8 × 14 3/8 inches)
when the AC adaptor is installed:
approx. 217 × 174 × 419.5mm (8 5/8 × 6 7/8 × 16 5/8 inches)
BVM-D9H5U/D9H5E/D9H5A:
approx. 217 × 218 × 364.5mm (8 5/8 × 8 5/8 × 14 3/8 inches)
when the AC adaptor is installed:
approx. 217 × 218 × 419.5mm (8 5/8 × 8 5/8 × 16 5/8 inches)
BVM-D14H1U/D14H1E/D14H1A:
approx. 346 × 280 × 519mm (13 5/8 × 11 1/8 × 20 1/2 inches)
BVM-D14H5U/D14H5E/D14H5A:
approx. 482 × 280 × 519mm (19 × 11 1/8 × 20 1/2 inches)

Specifications

Dimensional drawing

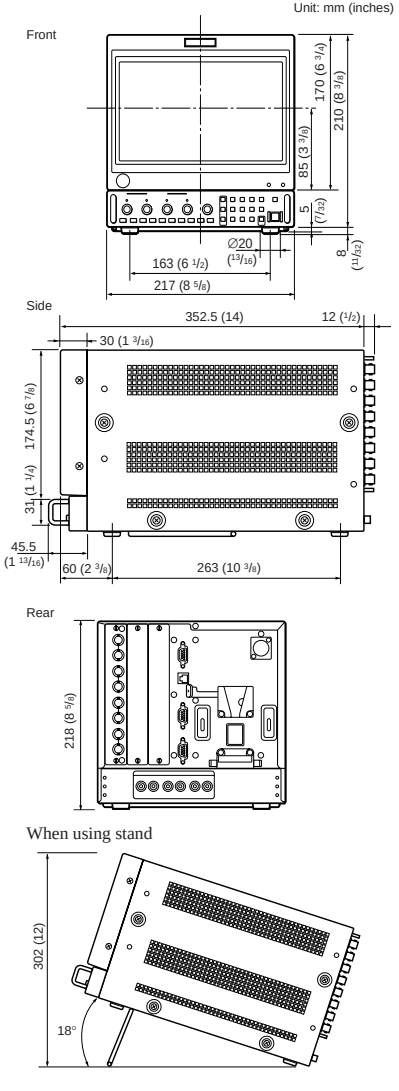
BVM-D9H1U/D9H1E/D9H1A

Unit: mm (inches)



BVM-D9H5U/D9H5E/D9H5A

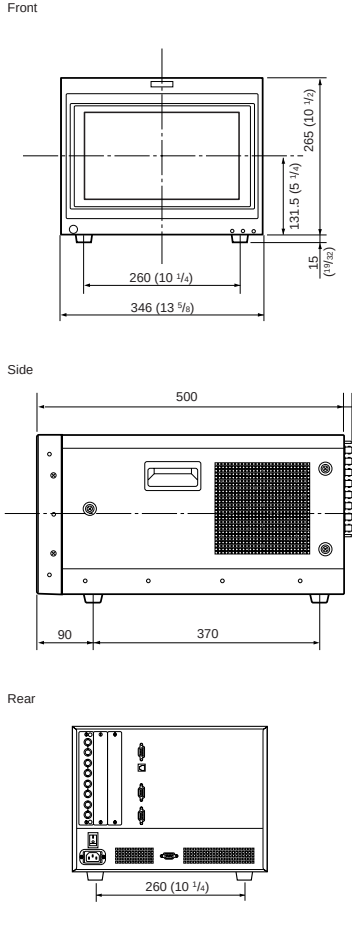
Unit: mm (inches)



When using stand

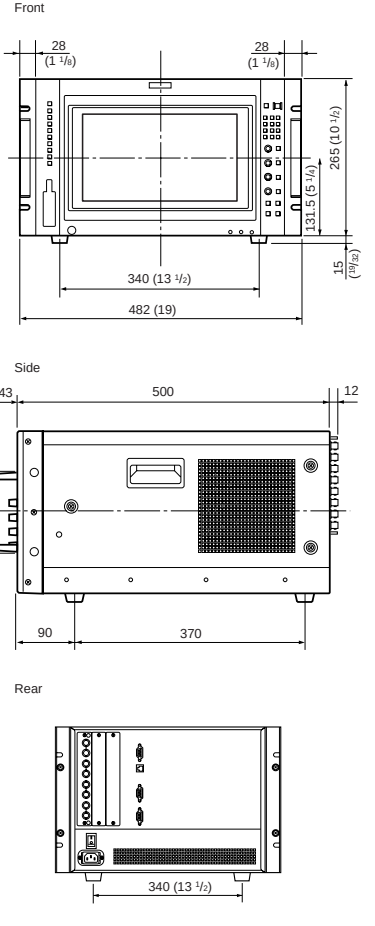
BVM-D14H1U/D14H1E/D14H1A

Unit: mm (inches)



BVM-D14H5U/D14H5E/D14H5A

Unit: mm (inches)



Specifications

Mass
BVM-D9H1U/D9H1E/D9H1A:
approx. 8.1 kg (17 lb 14 oz)
when the AC adaptor is installed:
approx. 8.9 kg (19 lb 10 oz)
BVM-D9H5U/D9H5E/D9H5A:
approx. 9.3 kg (20 lb 8 oz)
when the AC adaptor is installed:
approx. 10.1 kg (22 lb 4 oz)
BVM-D14H1U/D14H1E/D14H1A:
approx. 21 kg (46 lb 5 oz)
BVM-D14H5U/D14H5E/D14H5A:
approx. 23 kg (50 lb 11 oz)

Power consumption
BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A:
85 W max. (an optional BKM-142HD or BKM-120D is installed)
60 W typical (the supplied analog component input adaptor is installed)
BVM-D14H1U/D14H1E/D14H1A/
D14H5U/D14H5E/D14H5A:
115 W max. (an optional BKM-142HD or BKM-120D is installed)
100 W typical (the supplied analog component input adaptor is installed)

Peak inrush current
(1) Power ON, current probe method: 80 A (240 V) (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A),
45 A (240 V) (BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A)
(2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 10 A (230 V) (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A),
20 A (230 V) (BVM-D14H1U/D14H1E/D14H1A/D14H5U/D14H5E/D14H5A)

Power requirements
BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A:
AC 100 to 240 V, 50/60 Hz, DC $12V^{+5}_{-1}$ V
BVM-D14H1U/D14H1E/D14H1A/
D14H5U/D14H5E/D14H5A:
AC 100 to 240 V, 50/60 Hz

Input/output connectors

Video input/output
BNC type × 3 (with loop-through outputs, 75-ohm automatic termination)
R/G/B: 1 Vp-p ±6 dB, positive, high impedance
Y: 1 Vp-p ±6 dB, high impedance
P_B/P_R: 0.7 Vp-p ±6 dB, high impedance

Sync input/output
BNC type × 1 (with loop-through output, 75-ohm automatic termination)
Composite sync: 0.3 to 8 Vp-p, positive/negative tri-level sync signal input or negative bi-level sync signal input, high impedance

Return loss
More than 40 dB (10 MHz, with 75-ohm termination)

Remote control
OPTION: Mini-DIN 8-pin × 1
CONTROL UNIT:
D-sub 9-pin × 1 (BVM-D9H1U/D9H1E/D9H1A[1], BVM-D14H1U/D14H1E/D14H1A only)
PARALLEL REMOTE 1:
D-sub 9-pin × 1
PARALLEL REMOTE 2:
Modular connector 6-pin
SERIAL REMOTE: D-sub 9-pin × 2[1] (with loop-through output)

Audio input (BVM-D9H5U/D9H5E/D9H5A only)
Phono jack × 3 (with loop-through output)

1) BVM-D9H1U/D9H1E/D9H1A is swithced to REMOTE or CTRL UNIT with the select switch.

Video signal

Frequency response
575/50I, 480/60I component inputs
BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A/
D14H1U/D14H1E/D14H1A/
D14H5U/D14H5E/D14H5A:
50Hz to 10MHz (0 dB/–3 dB)
Models other than the above or RGB inputs
BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A:
48 Hz to 17 MHz, (1 dB/ –3 dB)
BVM-D14H1U/D14H1E/
D14H1A/D14H5U/D14H5E/
D14H5A:
48 Hz to 24 MHz, (0 dB/ –3 dB)

Aperture compensation[2]
OFF: 0 dB
ON: 2 dB to 6 dB
575/50I, 480/60I inputs: 5 MHz
Input other than the above: 16 MHz

Picture performance

Normal scan
5% overscan of CRT effective screen area (adjustable range greater than ±15%)

Underscan
3% underscan of CRT effective screen area (adjustable range greater than ±15%)

Linearity
Within a central area bounded by a circle with a diameter equal to the picture height, less than 1.0 % of the picture height, and outside the same area, about 2.0 % of the picture height

Color temperature
D93, D65 (adjustable to other color temperatures)

Convergence error
Within a central area bounded by a circle with a diameter equal to the picture height.
Less than 0.4 mm with a central area bounded by a circle and less than 0.7 mm at any other point.

Standard luminescence
120 cd/m² (at standard 1 Vp-p 100% white signal)

Raster size stability
Less than 1% of picture height (at 120 cd/m² peak luminescence, 10 to 90% APL)

Resolution (at screen center, 120 cd/m² luminescence)
BVM-D9H1U/D9H1E/D9H1A/
D9H5U/D9H5E/D9H5A:
340 TV lines (16:9)
450 TV lines (4:3)
BVM-D14H1U/D14H1E/D14H1A/
D14H5U/D14H5E/D14H5A:
600 TV lines (16:9)
800 TV lines (4:3)

Operating conditions

Temperature	0°C to 35°C (32°F to 95°F)
Optimum temperature	20°C to 30°C (68°F to 86°F)
Humidity	0% to 90% (no condensation)
Pressure	700 hPa to 1060 hPa

Storage and transport conditions

Temperature	–10°C to 40°C (14°F to 104°F)
Humidity	0% to 90%
Pressure	700 hPa to 1060 hPa

2) The aperture cannot be compensated for RGB input signals.

http://getMANUAL.com

Specifications

Accessories supplied

AC power cord (1)
AC adaptor (1) (BVM-D9H1U/D9H1E/D9H1A/D9H5U/D9H5E/D9H5A only)
AC plug holder (1)
Tally plate (1)
4:3 mask (1)
Operation manual (1)

Acquired safety regulations

UL1950, CSA950
FCC Class A, IC Class A
DHHS, DNHW
TÜV (EN60950), PTB
CE-Marking, C-tick Mark

Design and specifications are subject to change without notice.

Available Signal Format

System	Total lines per frame	Active lines per frame	** Frame rate (Hz)	Scanning format	Aspect	Standard
575/50I (*PAL)	625	575	25	2:1 interlace	16:9/4:3	ITU 601
480/60I (*NTSC)	525	483	30	2:1 interlace	16:9/4:3	ITU 601
575/50P	625	575	50	Progressive	16:9/4:3	–
480/60P	525	483	60	Progressive	16:9/4:3	SMPTE 293M
1080/48I	1125	1080	24	2:1 interlace	16:9	–
1080/50I	1125	1080	25	2:1 interlace	16:9	SMPTE 294M
1035/60I	1125	1035	30	2:1 interlace	16:9	BTA S-001B
1080/60I	1125	1080	30	2:1 interlace	16:9	SMPTE 274M/BTA S-001B
720/60P	750	720	60	Progressive	16:9	SMPTE 296M

* Available when the optional adaptor is installed.
** Also compatible with $^{1}/_{1.001}$.

Connection Cable Specifications for Color Temperature Probes

Special cables are required to connect color temperature probes other than the Sony BKM-14L to the monitor.

The following diagrams show specifications and pin assignments for the required cables.

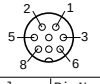
Connection cable for GRASEBY SLS 9400 probe

Modular connector



Signal	Pin Number
N.C.	1
GND	2
RXD	3
TXD	4
GND	5
N.C.	6

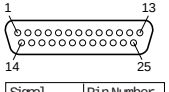
Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD

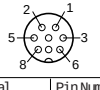
Connection cable for MINOLTA CA-100 probe

D-sub 25-pin connector (male)



Signal	Pin Number
N.C.	1
TXD	2
RXD	3
RTS	4
CTS	5
N.C.	6
GND	7
N.C.	8 to 25

Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD

Connection cable for PHILIPS PM 5639 probe (corresponds to PHILIPS PM 5639/64 cable)

Modular connector



Signal	Pin Number
+5V	1
N.C.	2
RXD	3
TXD	4
N.C.	5
GND	6

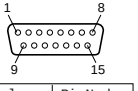
Mini DIN 8-pin connector (male)



Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD

Connection cable for THOMA TF6 probe

D-sub 15-pin connector (female)



Signal	Pin Number
N.C.	1
RXD	2
TXD	3
N.C.	4
N.C.	5
N.C.	6
GND	7
N.C.	8 to 15

Mini DIN 8-pin connector (male)



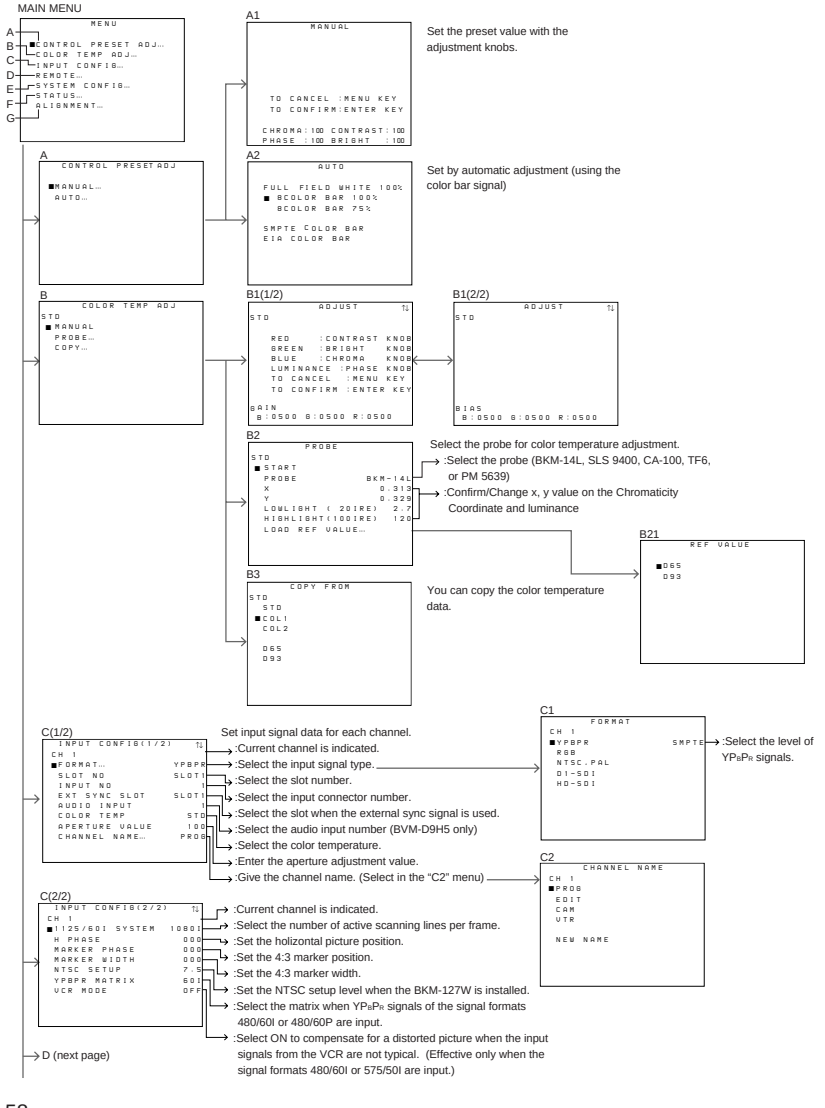
Signal	Pin Number
1	NC
2	NC
3	RTS
4	GND
5	N.C.
6	TXD
7	+5V
8	RXD

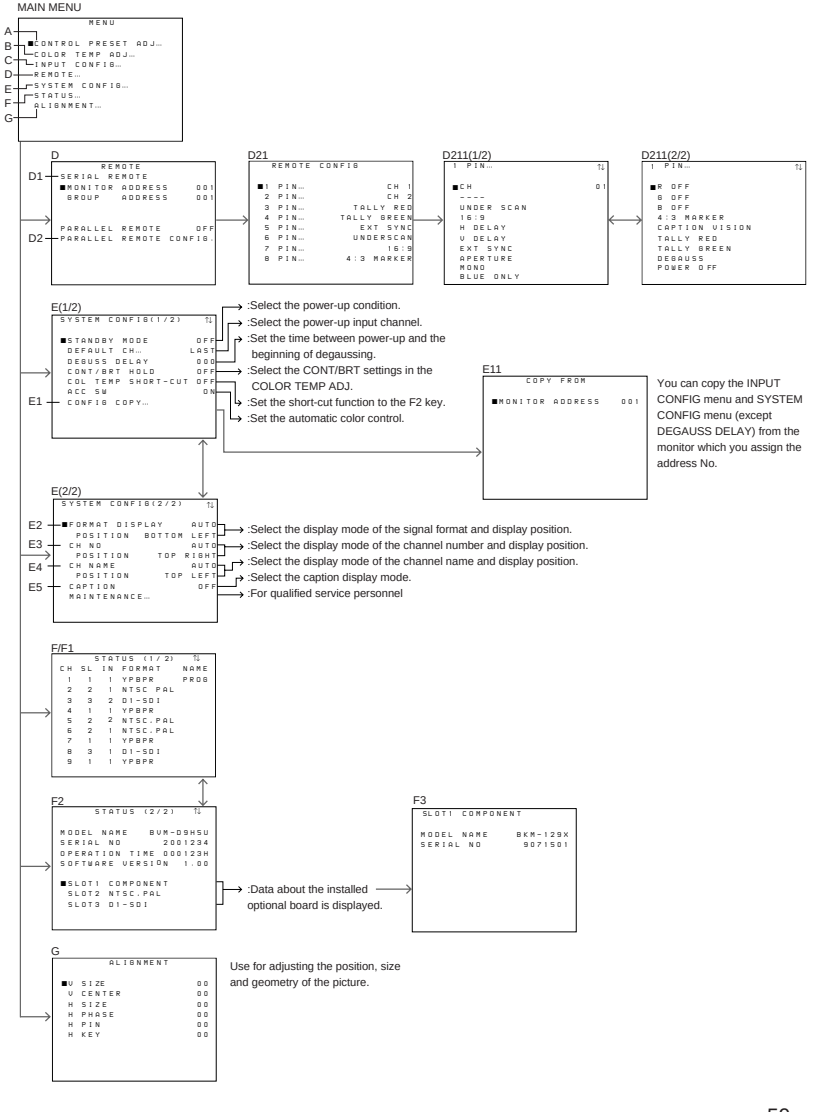
Menu Index

The menu index shows the menu items provided with this monitor in alphabetical order. For you reference, each menu item is followed by the page of this manual on which the item is explained, its menu number, and the Main Menu that the item belongs to.

Menu Item		Page	Menu number	Main menu
A	ACC SW	41(E)	–	SYSTEM CONFIG menu
	ADDRESS	45(E)	–	ADDRESS menu
	ADJUST	34(E)	–	COLOR TEMP ADJ menu
	ALIGNMENT	44(E)	G	ALIGNMENT menu
	APERTURE VALUE	36(E)	–	INPUT CONFIG menu
	AUDIO INPUT	36(E)	–	INPUT CONFIG menu
	AUTO	32(E)	A2	CONTROL PRESET ADJ menu
B	BRIGHT	32(E)	–	CONTROL PRESET ADJ menu
C	CAM	36(E)	–	INPUT CONFIG menu
	CAPTION	41(E)	E5	SYSTEM CONFIG menu
	CH	38(E)	D211	REMOTE menu
		40(E)	–	SYSTEM CONFIG menu
	CH NAME	41(E)	E4	SYSTEM CONFIG menu
	CH NO	41(E)	E3	SYSTEM CONFIG menu
	CHANNEL NAME	36(E)	C2	INPUT CONFIG menu
	CHROMA	32(E)	–	CONTROL PRESET ADJ menu
	COL TEMP SHORT-CUT	41(E)	–	SYSTEM CONFIG menu
	COL1	34(E)	–	COLOR TEMP ADJ menu
	COL2	34(E)	–	COLOR TEMP ADJ menu
	COLOR TEMP	36(E)	–	INPUT CONFIG menu
	COLOR TEMP ADJ	33(E)	B	COLOR TEMP ADJ menu
	CONFIG COPY	41(E)	E1	SYSTEM CONFIG menu
	CONT/BRT HOLD	41(E)	–	SYSTEM CONFIG menu
	CONTRAST	32(E)	–	CONTROL PRESET ADJ menu
	CONTROL PRESET ADJ	31(E)	A	CONTROL PRESET ADJ menu
	COPY	34(E)	B3	COLOR TEMP ADJ menu
D	D1-SDI	36(E)	–	INPUT CONFIG menu
	D65	34(E)	–	COLOR TEMP ADJ menu
	D93	34(E)	–	COLOR TEMP ADJ menu
	DEFAULT CH	40(E)	–	SYSTEM CONFIG menu
	DEGAUSS DELAY	40(E)	–	SYSTEM CONFIG menu
E	EDIT	36(E)	–	INPUT CONFIG menu
	EIA COLOR BAR	32(E)	–	CONTROL PRESET ADJ menu
	ENTER PASSWORD	40(E)	–	SYSTEM CONFIG menu
	EXT SYNC SLOT	36(E)	–	INPUT CONFIG menu
F	FORMAT	36(E)	C1	INPUT CONFIG menu
	FORMAT DISPLAY	41(E)	E2	SYSTEM CONFIG menu
	FULL FIELD WHITE 100 %	31(E)	–	CONTROL PRESET ADJ menu
G	GROUP ADDRESS	38(E)	–	REMOTE menu
H	H KEY	44(E)	–	ALIGNMENT menu
	H SIZE	44(E)	–	ALIGNMENT menu
	H PHASE	36(E)	–	INPUT CONFIG menu
		44(E)	–	ALIGNMENT menu
	H PIN	44(E)	–	ALIGNMENT menu
	HD-SDI	36(E)	–	INPUT CONFIG menu
	HIGH LIGHT	34(E)	–	COLOR TEMP ADJ menu
I	INPUT CONFIG	35(E)	C	INPUT CONFIG menu
	INPUT NO	36(E)	–	INPUT CONFIG menu
L	LAST	40(E)	–	SYSTEM CONFIG menu
	LOAD REF VALUE	34(E)	B21	COLOR TEMP ADJ menu
	LOW LIGHT	34(E)	–	COLOR TEMP ADJ menu
M	MAINTENANCE	40(E)	E5	SYSTEM CONFIG menu
	MANUAL	32(E)	A1	CONTROL PRESET ADJ menu
		34(E)	B1	COLOR TEMP ADJ menu
	MARKER PHASE	36(E)	–	INPUT CONFIG menu
	MARKER WIDTH	36(E)	–	INPUT CONFIG menu
	MODEL NAME	42(E)	–	STATUS menu
	MONITOR ADDRESS	38(E)	–	REMOTE menu
		41(E)	E11	SYSTEM CONFIG menu
N	NEW NAME	36(E)	–	INPUT CONFIG menu
	NTSC, PAL	36(E)	–	INPUT CONFIG menu
	NTSC SET UP	36(E)	–	INPUT CONFIG menu
P	PARALLEL REMOTE	38(E)	–	REMOTE menu
	PARALLEL REMOTE CONFIG	38(E)	D2	REMOTE menu
	PHASE	32(E)	–	CONTROL PRESET ADJ menu
	POSITION	41(E)	–	SYSTEM CONFIG menu
	PROBE	34(E)	–	COLOR TEMP ADJ menu
	PROG	36(E)	–	INPUT CONFIG menu
R	REMOTE	37(E)	D	REMOTE menu
	RGB	35(E)	–	INPUT CONFIG menu
	R OFF	38(E)	D211	REMOTE menu
S	SERIAL NO	42(E)	–	STATUS menu
	SERIAL REMOTE	38(E)	D1	REMOTE menu
	SLOT 1	42(E)	F3	STATUS menu
	SLOT NO	36(E)	–	INPUT CONFIG menu
	SMPTE COLOR BAR	32(E)	–	CONTROL PRESET ADJ menu
	STANDBY MODE	40(E)	–	SYSTEM CONFIG menu
	START	34(E)	–	COLOR TEMP ADJ menu
	STATUS	42(E)	F	STATUS menu
	STD	34(E)	–	COLOR TEMP ADJ menu
	SYSTEM CONFIG	39(E)	E	SYSTEM CONFIG menu
V	V CENTER	44(E)	–	ALIGNMENT menu
	V SIZE	44(E)	–	ALIGNMENT menu
	VTR	36(E)	–	INPUT CONFIG menu
X	X	34(E)	–	COLOR TEMP ADJ menu
Y	Y	34(E)	–	COLOR TEMP ADJ menu
	YPBPR	36(E)	–	INPUT CONFIG menu
	YPBPR MATRIX	36(E)	–	INPUT CONFIG menu
1	1125/60I SYSTEM	36(E)	–	INPUT CONFIG menu
	1 PIN	38(E)	D21	REMOTE menu
2	2 PIN	38(E)	–	REMOTE menu
3	3 PIN	38(E)	–	REMOTE menu
4	4 PIN	38(E)	–	REMOTE menu
5	5 PIN	38(E)	–	REMOTE menu
6	6 PIN	38(E)	–	REMOTE menu
7	7 PIN	38(E)	–	REMOTE menu
8	8COLOR BAR 100%	32(E)	–	CONTROL PRESET ADJ menu
	8COLOR BAR 75%	32(E)	–	CONTROL PRESET ADJ menu
	8 PIN	38(E)	–	REMOTE menu

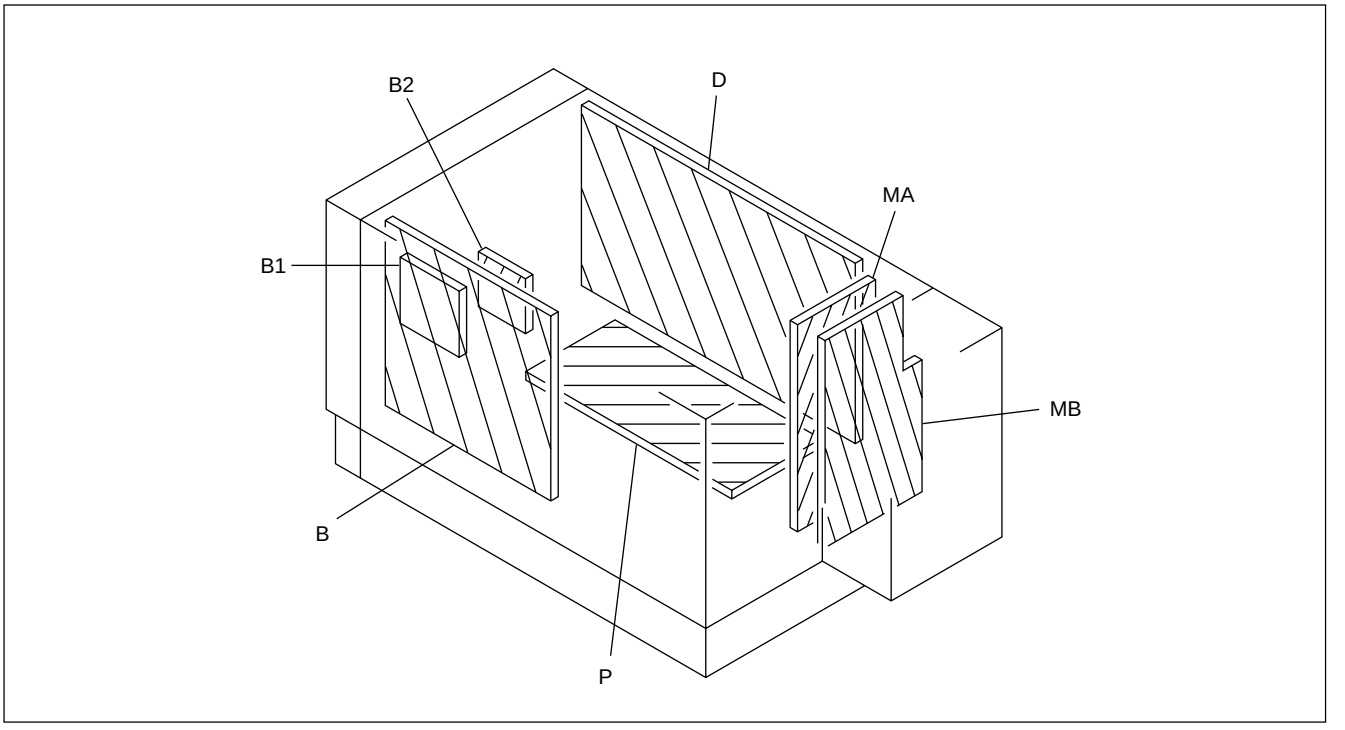
Menu Configuration



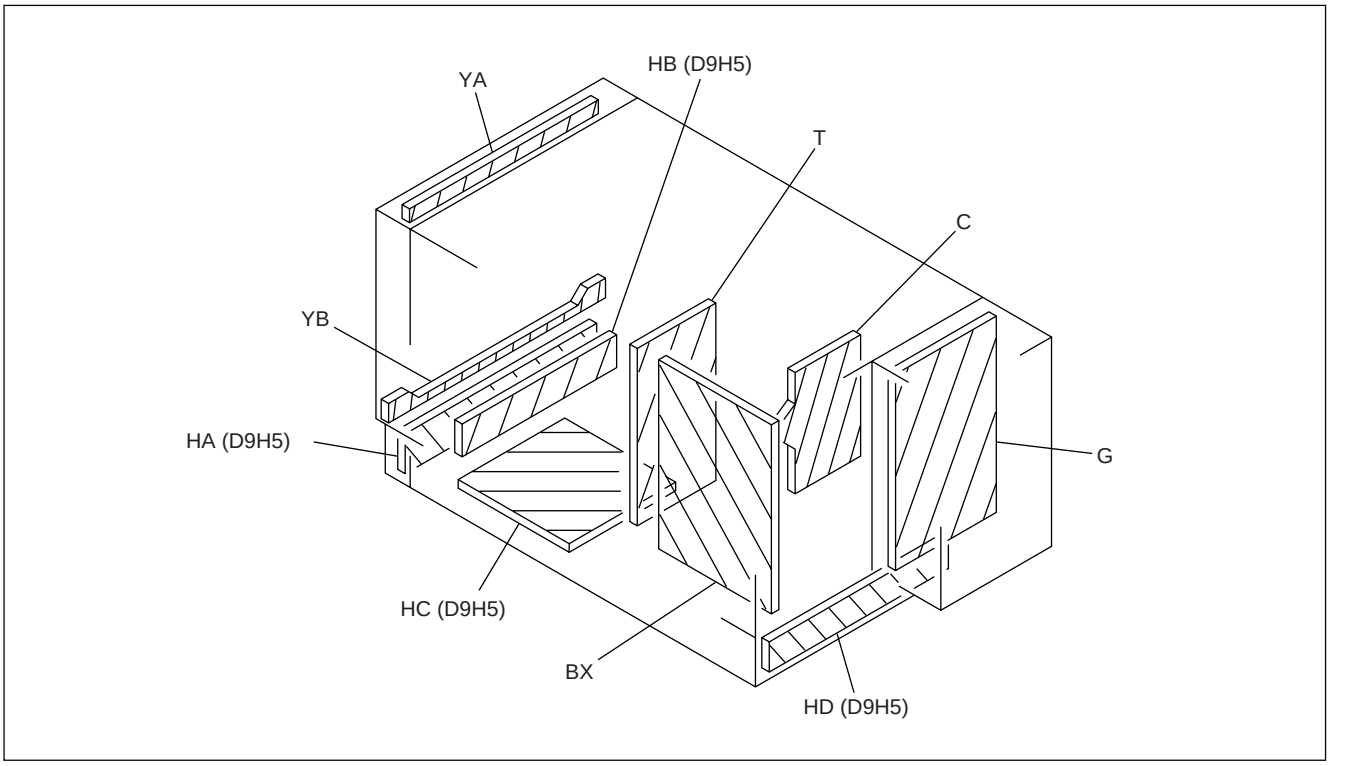


Section 2
Service Informations

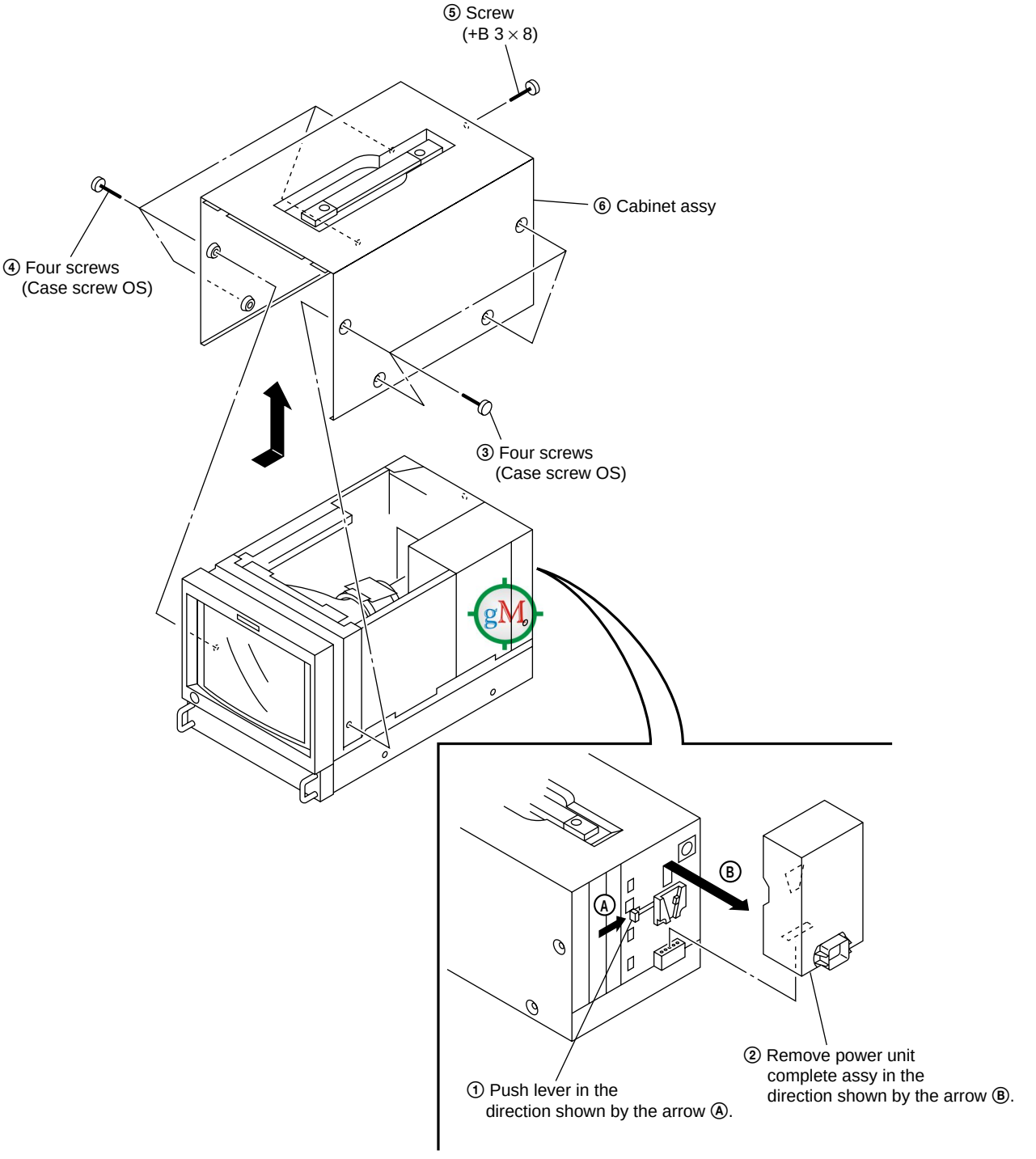
2-1. Circuit Boards Location (1/2)



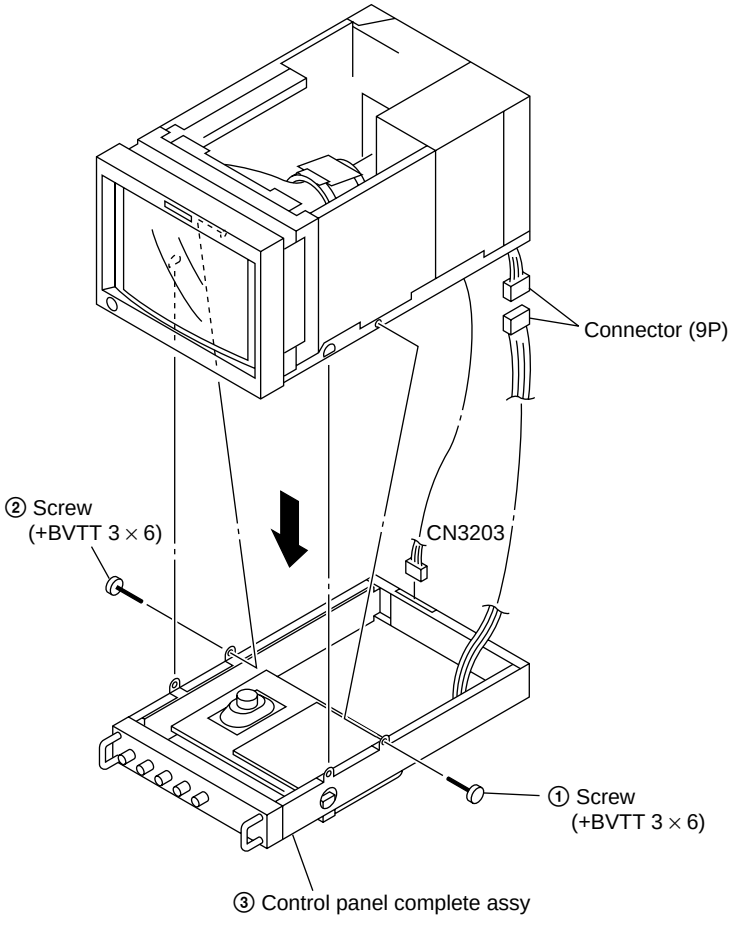
2-1. Circuit Boards Location (2/2)



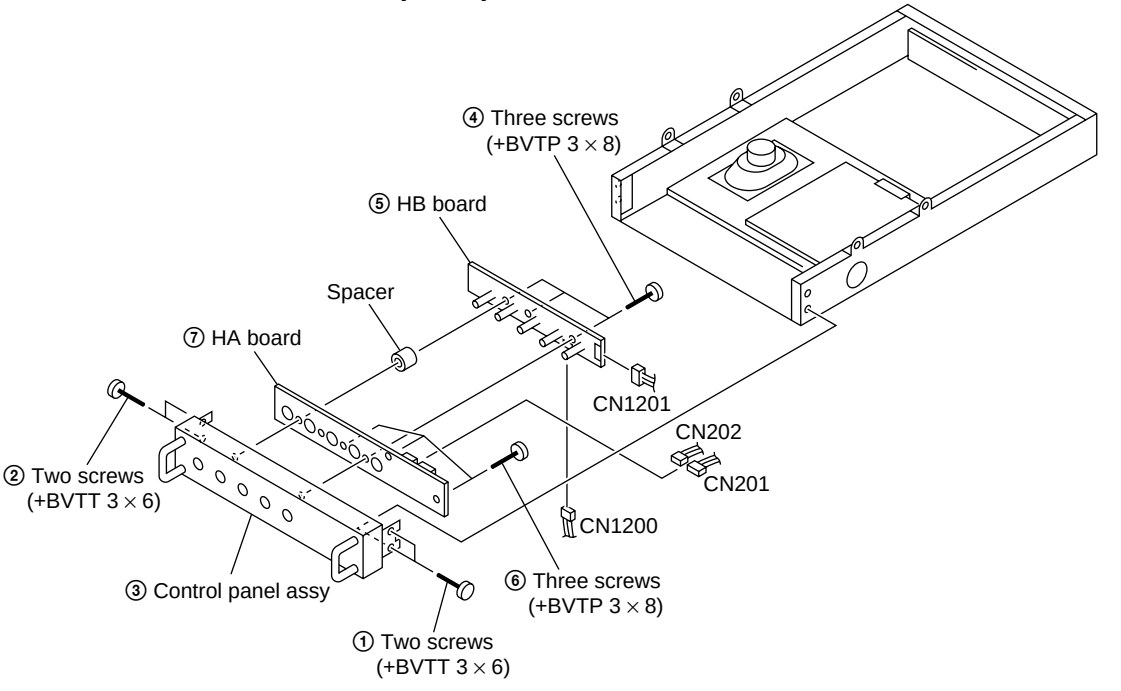
2-2-1. Cabinet Assy Removal



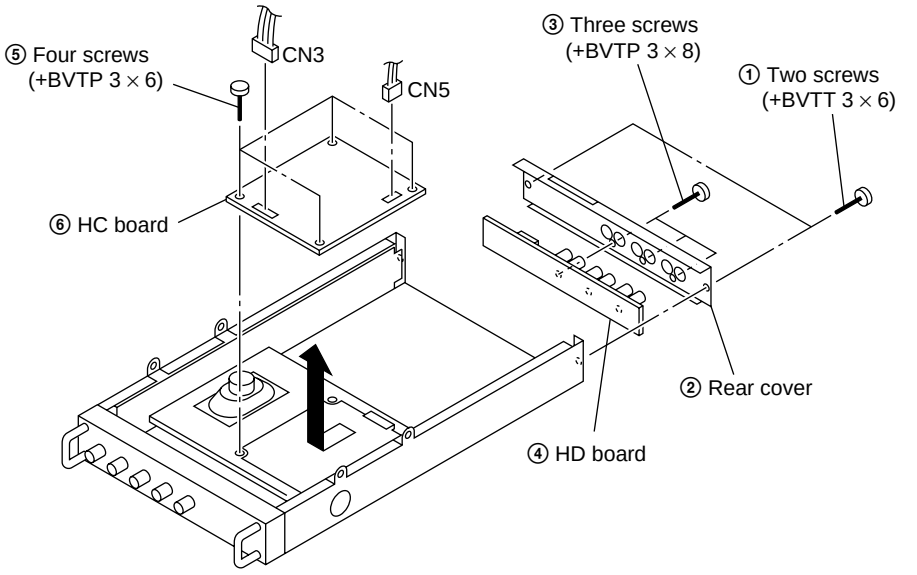
2-2-2. Control Panel Complete Assy Removal (D9H5)



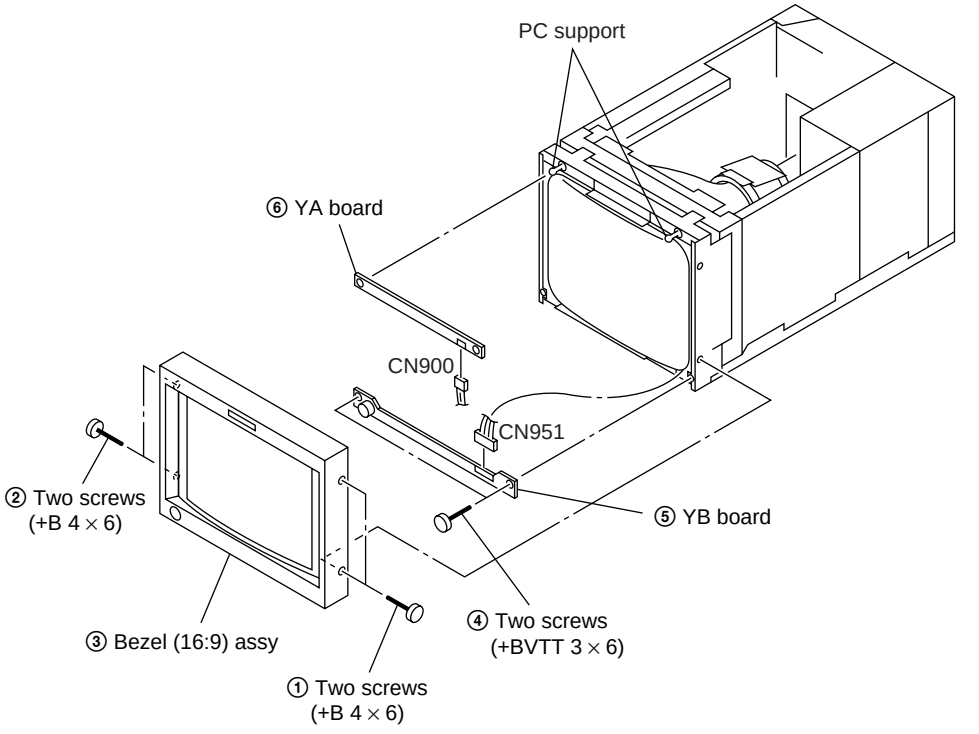
2-2-3. HA and HB Boards Removal (D9H5)



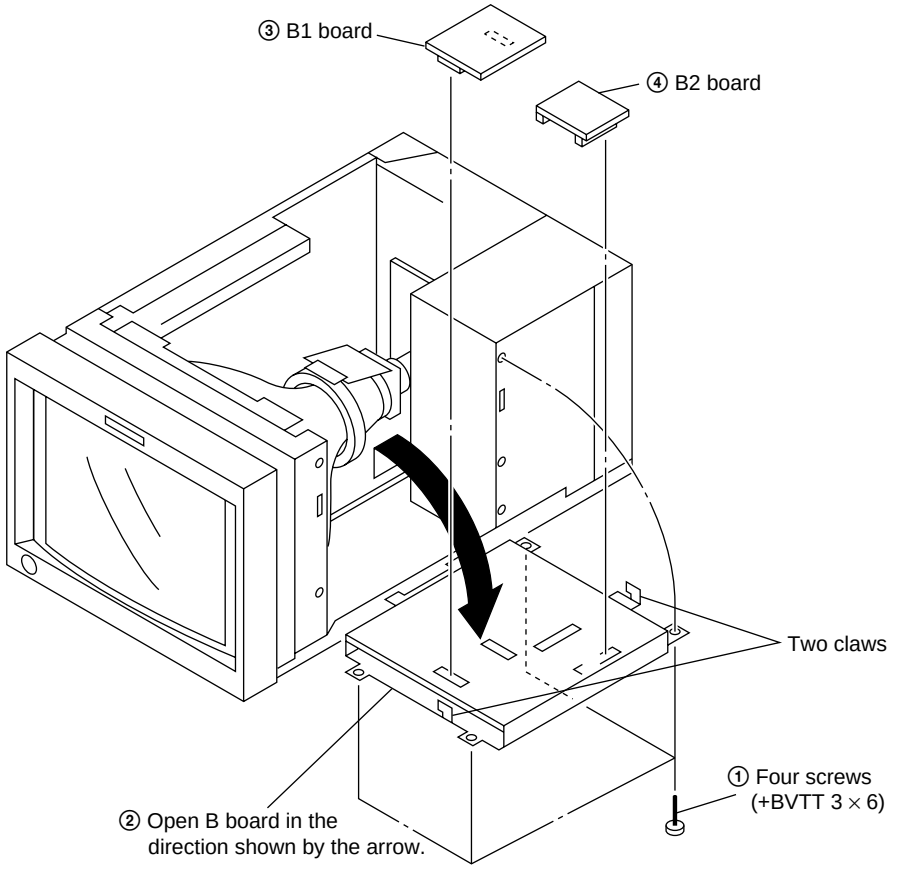
2-2-4. HC and HD Boards Removal (D9H5)



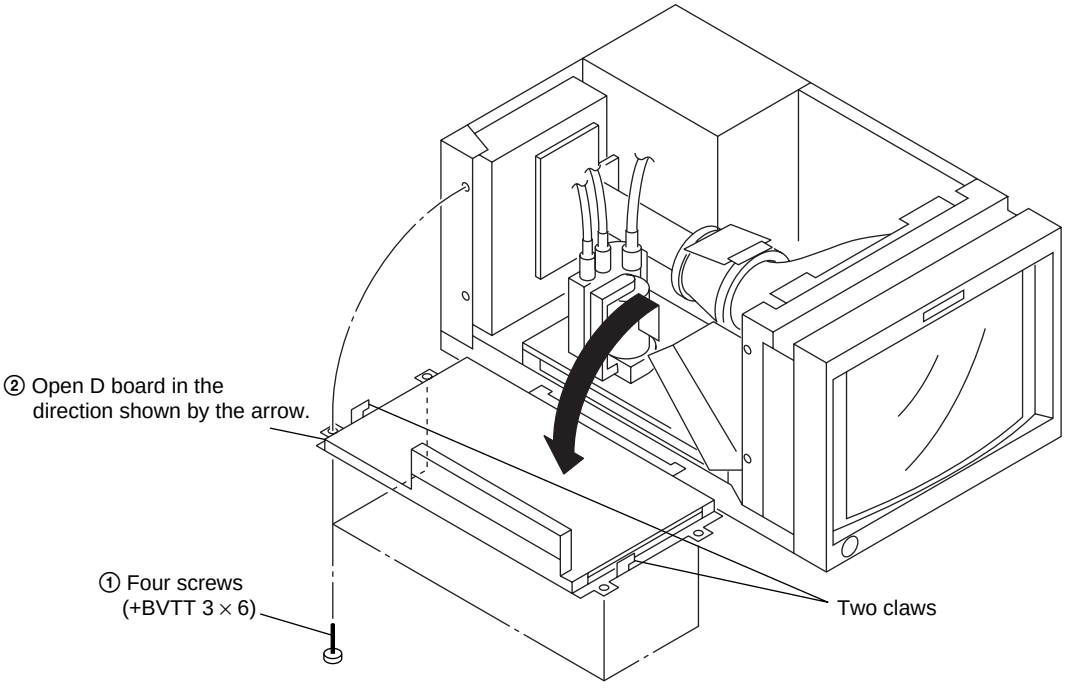
2-2-5. YA and YB Boards Removal



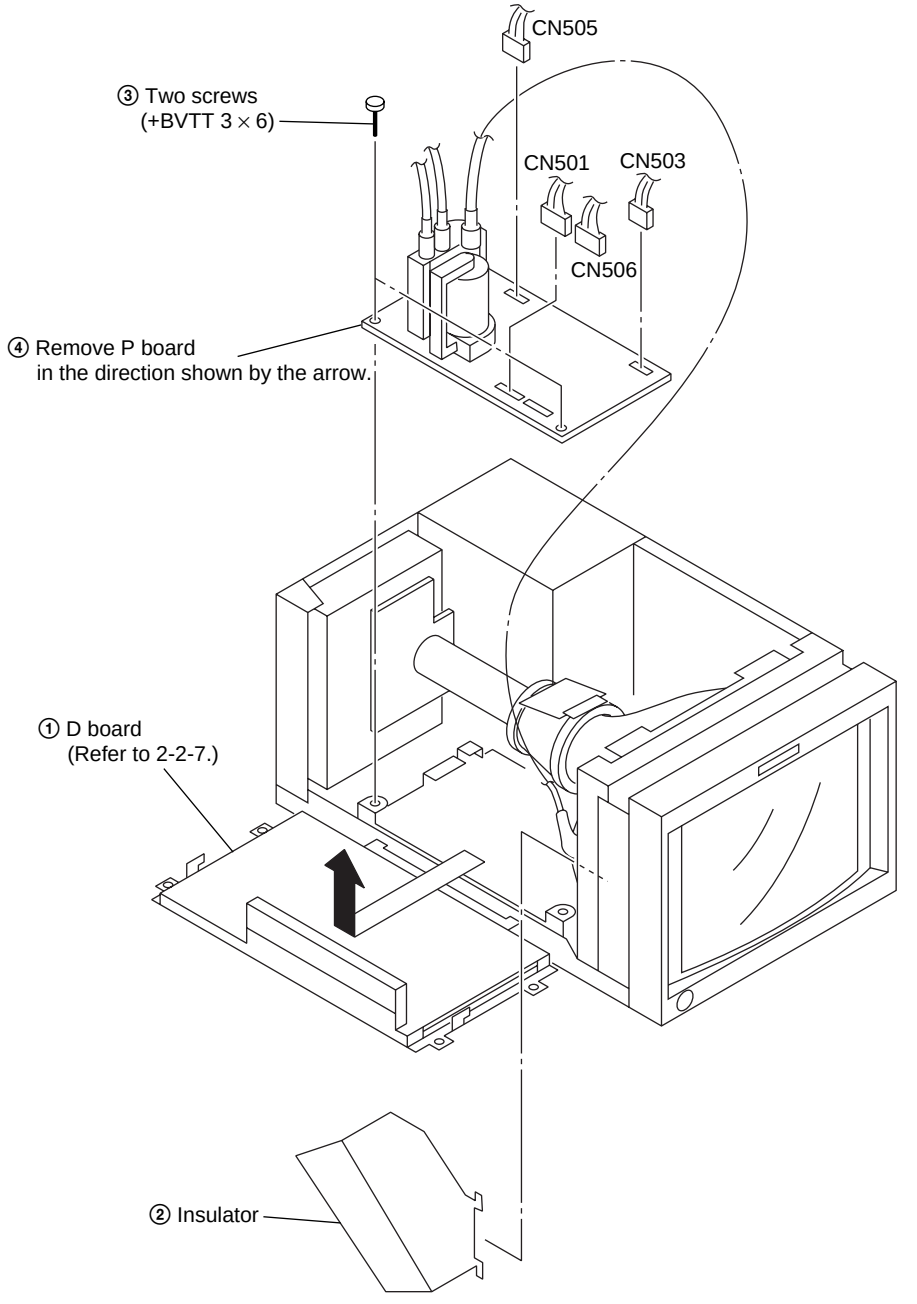
2-2-6. B, B1 and B2 Boards Removal



2-2-7. How to Open D Board

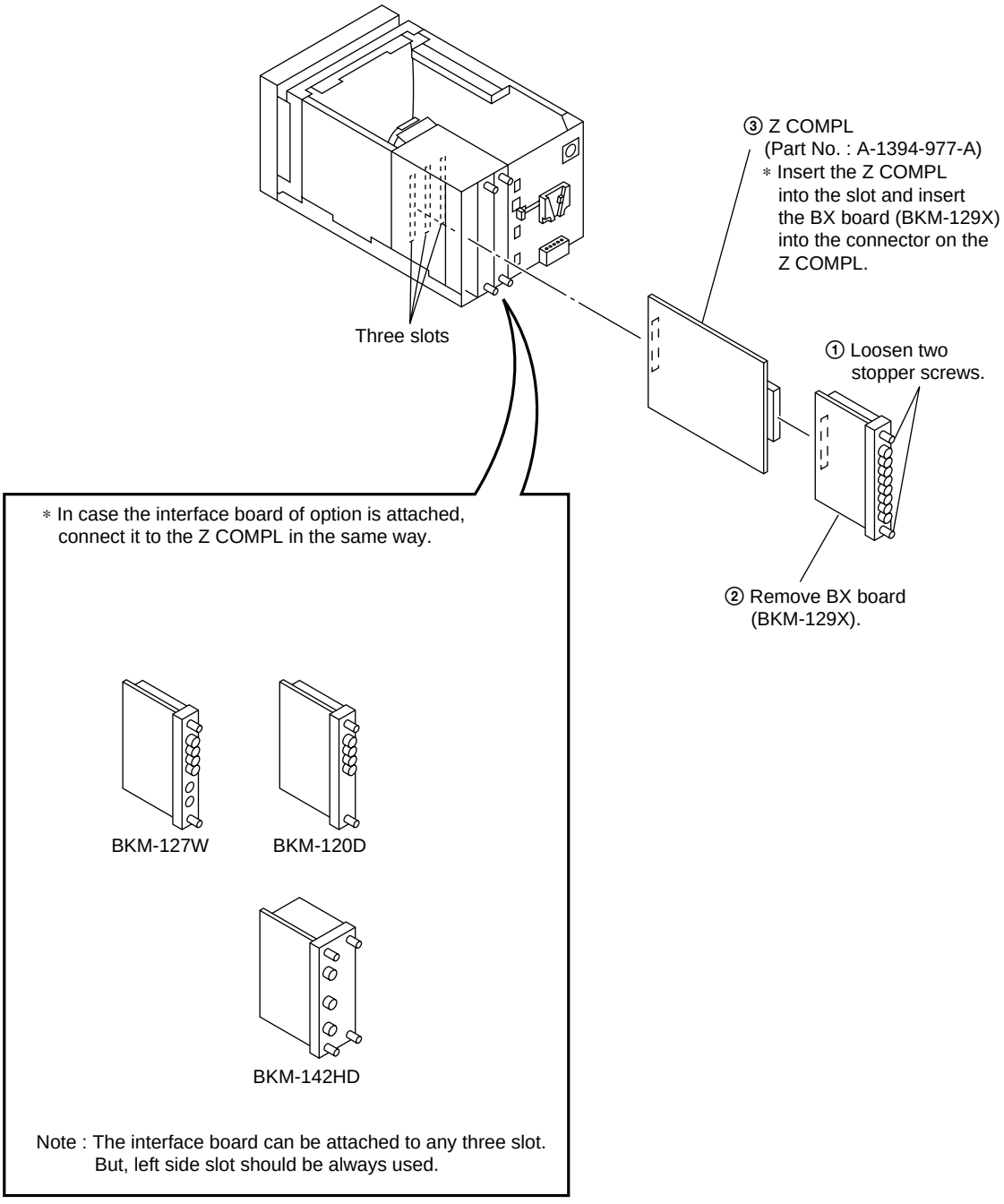


2-2-8. P Board Removal

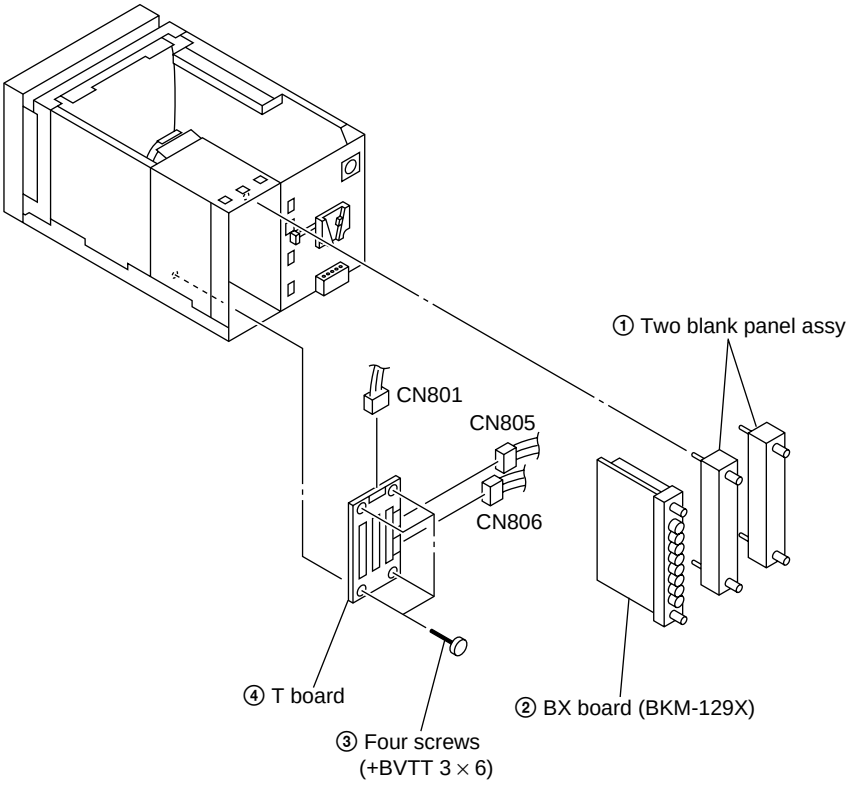


http://getMANUAL.com

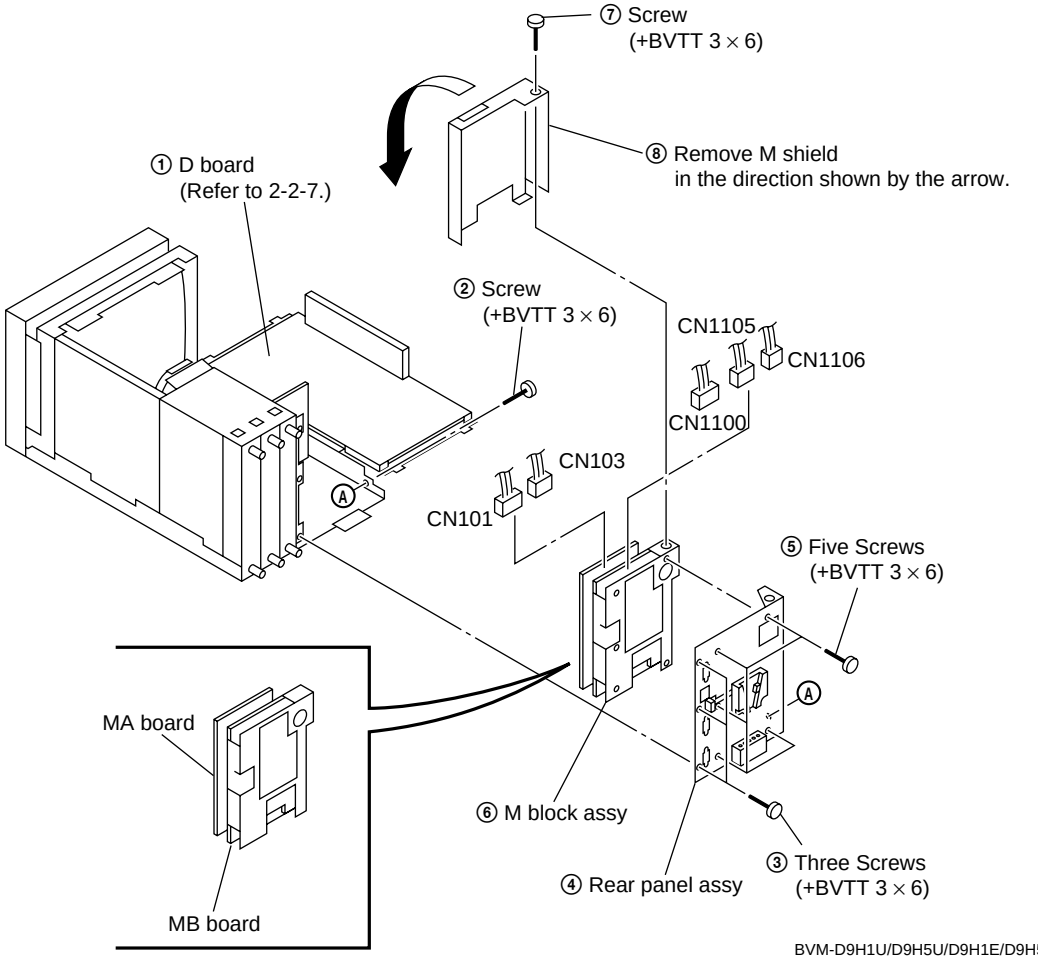
2-2-9. BX Board (BKM-129X) Removal and Check



2-2-10. T Board Removal

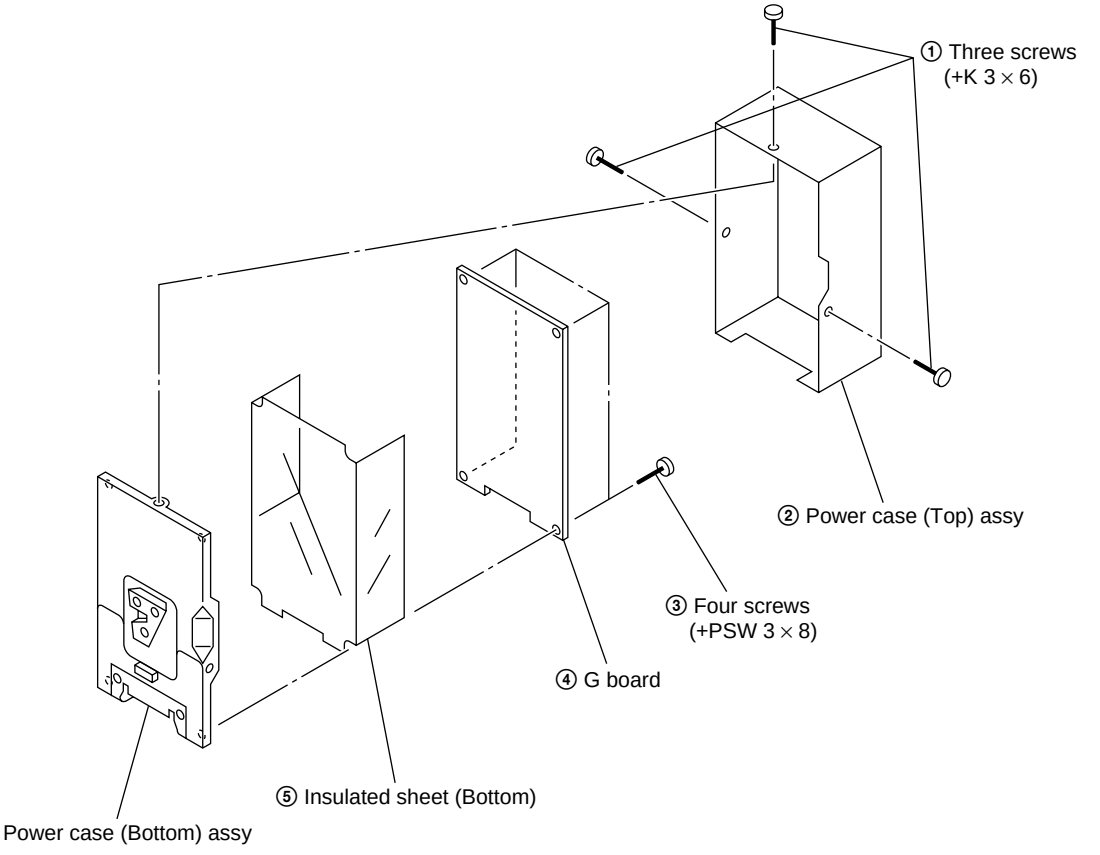


2-2-11. M Block Assy (MA and MB Boards) Removal

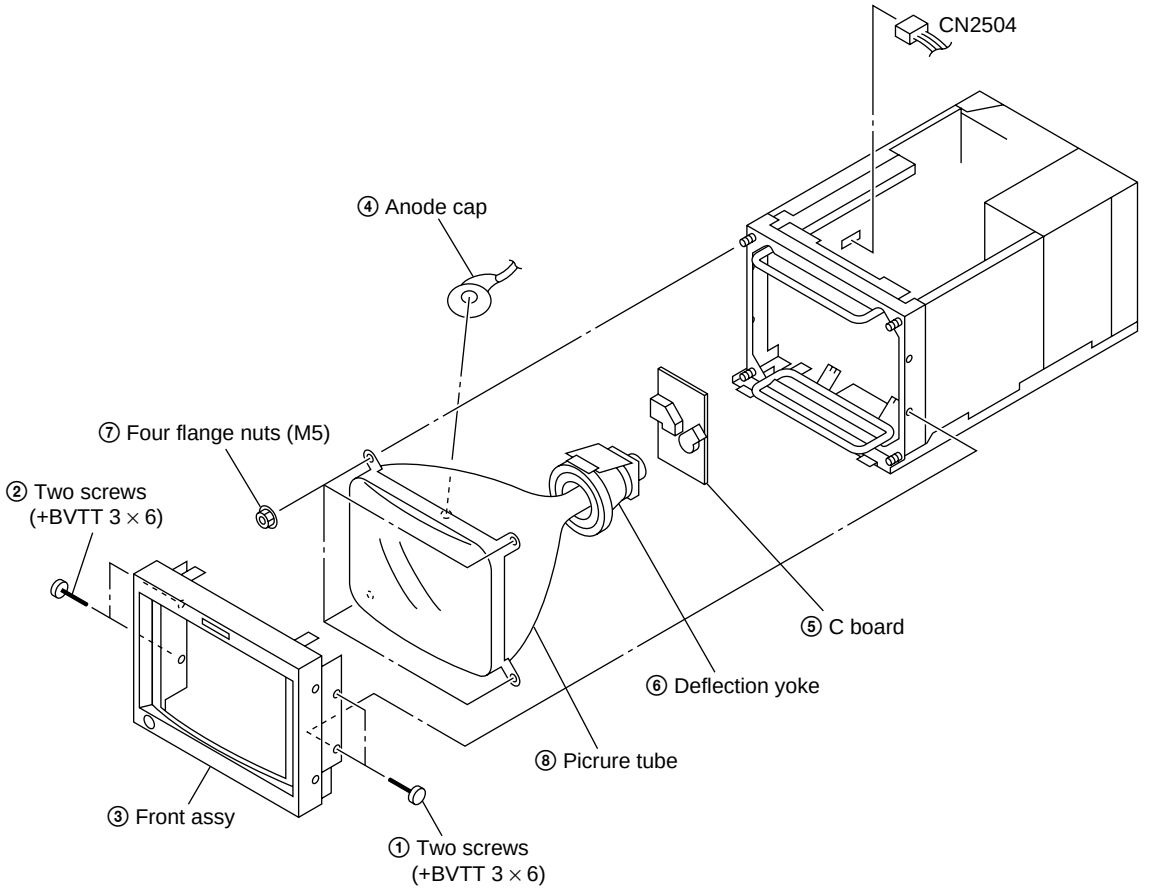


2-2-12. G Board Removal

* Remove the power unit complete assy. (Refer to 2-2-1.)



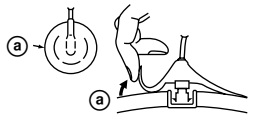
2-2-13. Picture Tube Removal



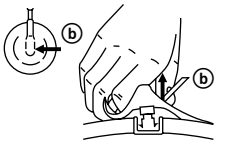
• REMOVAL OF ANODE CAP

Note: To eliminate electric shock hazard, when replacing the picture tube, short-circuit the anode of the picture tube and the high-voltage terminal of anode cap to the picture tube shield or carbon painted on the picture tube, after removing the anode.

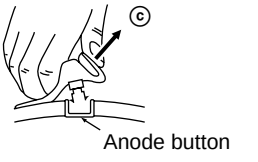
• Removal Procedure



(1) Turn up one side of the rubber cap in the direction indicated by arrow ⓐ.



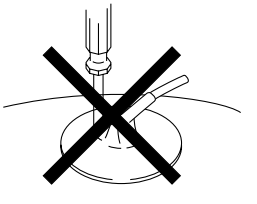
(2) Using a thumb, pull up the rubber cap firmly in the direction indicated by arrow ⓑ.

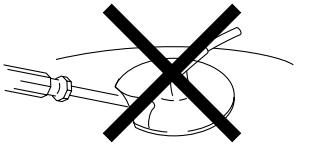


(3) When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

• Handling Precautions

(1) Do not scratch the surface of anode cap with a sharp object.
(2) Do not press the rubber so hard that it damages the inside of anode caps. A shatter-hook terminal is built into the rubber.
(3) Do not turn the foot of the rubber over.
The shatter-hook terminal will stick out or damage the rubber.





Section 3
Set-Up Adjustments

3-1. Set-Up Adjustment When CRT is Replaced

This section describes the adjustments to be performed when the CRT is replaced.

[Preparations]

• Required tools and measuring instruments

1. Signal generator
   YPBYPR signal generator
   - 1080/60i (1125) : SMPTE274M standard/ BTA S-001 standard
   - 1035/60i (1125) : BTA S-001 standard or SMPTE240M standard
   - 720/60p : SMPTE296M standard
   - 480/60p (525p) : BTA T-1004 standard or SMPTE293M standard
   - 480/60i (525) : ITU601
   - 1080/48i (1125) : —
   - 1080/50i (1125) : SMPTE274M standard
   - 720/50p : —
   - 575/50p (625p) : —
   - 575/50i (625) : ITU601

   NTSC analog composite signal generator
   HD SDI signal generator
   D1 SDI signal generator
2. BKM-127W (NTSC/PAL input adapter)
3. BKM-142HD (HD SDI input adapter)
4. BKM-120D (D1 SDI input adapter)
5. Oscilloscope
6. Luminance meter
7. Color analyzer (Minolta CA-100)
8. Cable of the following specifications to connect the RS-232C terminal of the CA-100 and the OPTION terminal of the monitor.

HDM option connector side
Mini DIN 8-pin

H SYNC	1
V SYNC	2
RTS	3
GND	4
NC	5
TXD	6
+5V	7
RXD	8

CA-100 RS-232C connector side
D Sub 25-pin (male)

1	FG
2	TXD
3	RXD
4	RTS
5	CTS
6	NC
7	GND
8	NC
9 – 19	NC
20	DTR
21 – 25	NC

• Setting the INPUT CONFIGURATION menu

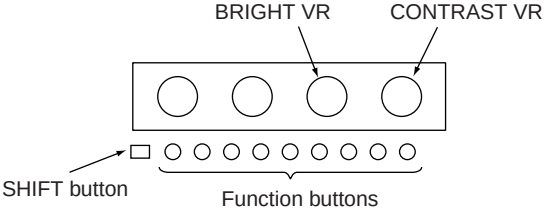
Set the INPUT CONFIGURATION menu of the SETUP menu as shown below unless otherwise specified.

FORMAT ..... YPBPR
SLOT NO 1
INPUT NO 1
SYNC MODE ..... INT
APEARTURE VALUE 100
CHANNEL NAME ..... PROG
COLOR TEMP ..... STD
H PHASE 000
MARKER PHASE 000
MARKER WIDTH 000

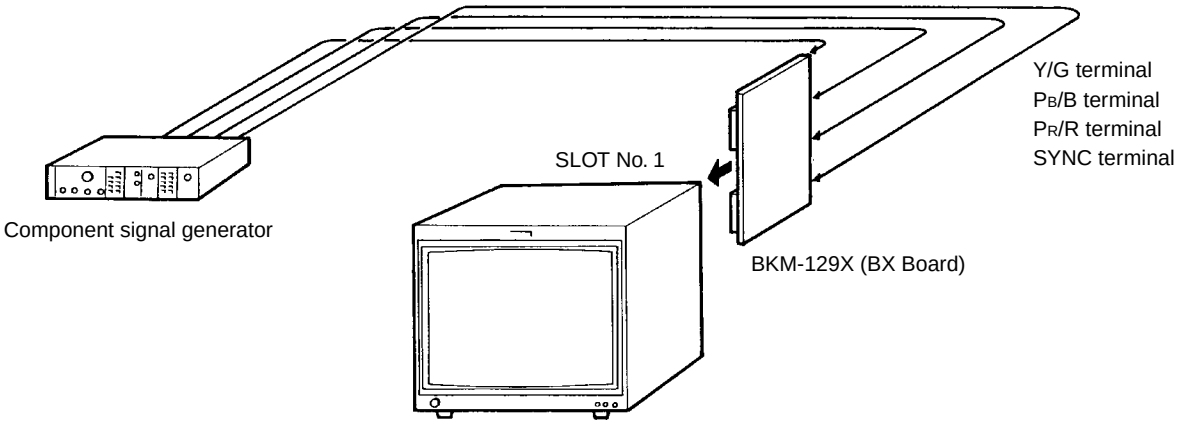
• Operate the SYSTEM CONFIG menu as follows.

Use the SYSTEM menu to select ALL SYSTEM with the RE-LOAD FACTORY DATA, and execute it.

BVM-D9H1/D9H5
control panel



- **Connection diagram**



[Focus Adjustment]

1. Connect the 1080/60i cross-hatch signal (see note) to the ANALOG Y/G input connector.

Note: This is the 1125 (1080) cross-hatch signal.

2. Set the initial (default) value to the following DF adjustment data.
   FOCUS AMP : 00
   FOCUS KEY : 07

Note: This menu is located in the directory under the DEFLECTION menu of the MAINTENANCE menu.

3. Obtain the optimum focus at the center of the screen by adjusting the FOUCS adjustment control.
4. Connect the 1080/60i monoscope signal to the ANALOG Y/G input connector.
5. Check that the horizontal resolution higher than the specifications can be recognized.
   Specifications: 320 TV lines or more

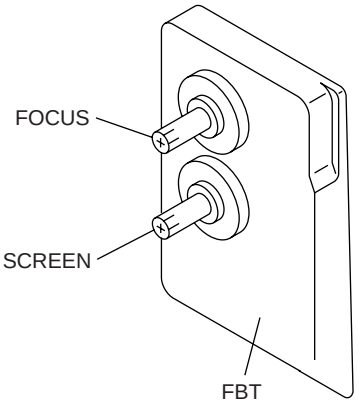


Fig. 1-1

[Landing Adjustment]

1. Connect the 480/60i entire-white signal (see note) to the ANALOG Y/G input connector.

Note: This is the NTSC entire-white signal.

2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
3. Press the 16:9 button to the OFF position to set the 4:3 mode. [The LED (orange) on top of the button turns off.]
4. Direct the CRT screen toward east (or west). Press the DEGAUSS button.
5. Set the Purity knob in the mechanical center.

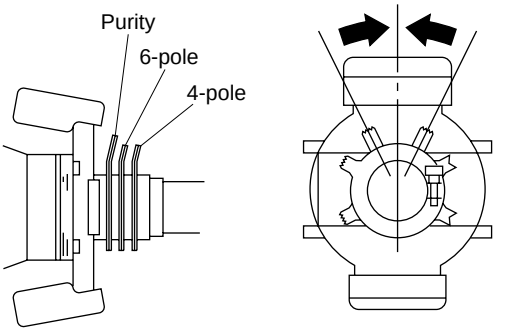


Fig. 1-2

6. Push the DY (deflection yoke) to the front as far as it can go.
7. Change the screen display to all green only as follows. [While the SFHIT is ON (the orange LED on the SHIFT button turns on), press the R and B button to ON. (The orange LED on the SHIFT button turns on.)]
8. Adjust the Purity knob until green comes to the center of the display.

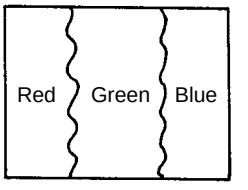


Fig. 1-3

9. Move back the DY so that the entire screen shows the green only.

10. Connect the 480/60i cross-hatch signal (see note) to the ANALOG Y/G input connector.
    Note: This is the NTSC cross-hatch signal.
11. Adjust the DY inclination. After DY inclination adjustment is complete, tighten the DY fixing screw.
12. Fix the deflection yoke (DY) using the three DY spacers.

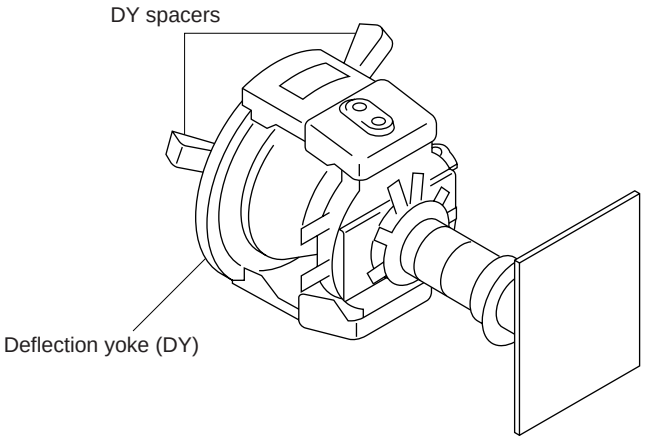


Fig. 1-4

- Final adjustment
  When the adjustment is complete, check that mis-landing (landing error) does not occur even when the monitor is directed in all directions of east, west, south and north.

[H. Blanking Adjustment]

- Preparation

1. Connect the monoscope signal of the signal formats that are shown in the following table, to the ANALOG Y/G input connector. Perform the H. blanking adjustment in the respective screen modes using the respective signal formats.

60 Hz system

Mode	Signal format	Screen mode	
MODE1	1080/60i	16 : 9	NORMAL
MODE2	(1125)		UNDER SCAN
MODE3	1035/60i	16 : 9	NORMAL
MODE4	(1125)		UNDER SCAN
MODE5	720/60p	16 : 9	NORMAL
MODE6			UNDER SCAN
MODE7	480/60p	16 : 9	NORMAL
MODE8	(525)		UNDER SCAN
MODE9		4 : 3	NORMAL
MODE10			UNDER SCAN
MODE11	480/60i	16 : 9	NORMAL
MODE12	(525)		UNDER SCAN
MODE13		4 : 3	NORMAL
MODE14			UNDER SCAN

50 Hz system

Mode	Signal format	Screen mode	
MODE15	1080/48i	16 : 9	NORMAL
MODE16	(1125)		UNDER SCAN
MODE17	1080/50i	16 : 9	NORMAL
MODE18	(1125)		UNDER SCAN
MODE19	720/50p	16 : 9	NORMAL
MODE20			UNDER SCAN
MODE21	575/50P	16 : 9	NORMAL
MODE22	(625)		UNDER SCAN
MODE23		4 : 3	NORMAL
MODE24			UNDER SCAN
MODE25	575/50i	16 : 9	NORMAL
MODE26	(625)		UNDER SCAN
MODE27		4 : 3	NORMAL
MODE28			UNDER SCAN

2. Increase the brightness by adjusting the BRIGHT control so that blanking becomes visible on screen.
   Note: The following adjustment menus are located in the directory under the DEFLECTION menu of the MAINTENANCE menu.
   H BLK LEFT H CENT
   H BLK RIGHT H PHASE
   H SIZE

• H. Blanking Adjustment

1. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
2. To select the 4:3 mode of the adjustment, press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
   To select the 16:9 mode of the adjustment, press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
3. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
4. To select the NORMAL mode of adjustment, press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]
   To select the UNDER SCAN mode of adjustment, press the UNDER SCAN button (▣) to its ON position to select the under scan mode. [The green LED turns on.]
5. Set the following data to maximum.
   H BLK LEFT : 255
   H BLK RIGHT : 255
6. Adjust the H. SIZE data so that the entire raster area is visible on screen.
7. Adjust the H. CENTER data so that the raster is position just in the center of the screen (so that A ≒ B). (Fig. 1-5)
8. Adjust the H. PHASE data so that the monoscope picture is position just in the center of the raster (so that C ≒ D).
9. Adjust the H. BLK. RIGHT data so that the horizontal blanking is position 0 to 2 mm outside the right end of the monoscope signal display area. (Fig. 1-6)
10. Adjust the H. BLK. LEFT data so that the horizontal blanking is position 0 to 2 mm outside the left end of the monoscope signal display area. (Fig. 1-6)
11. Return the H. SIZE data to the original data size.

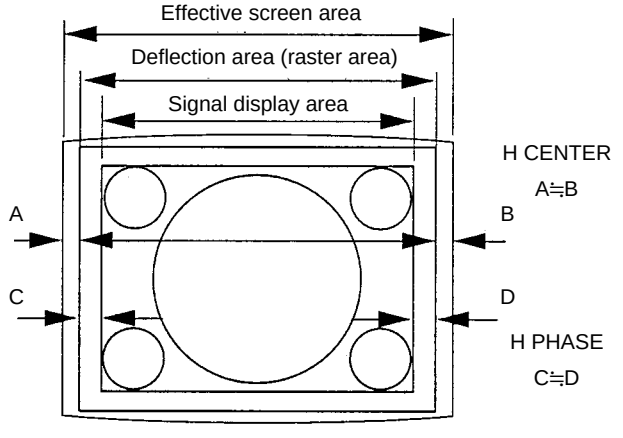


Fig. 1-5

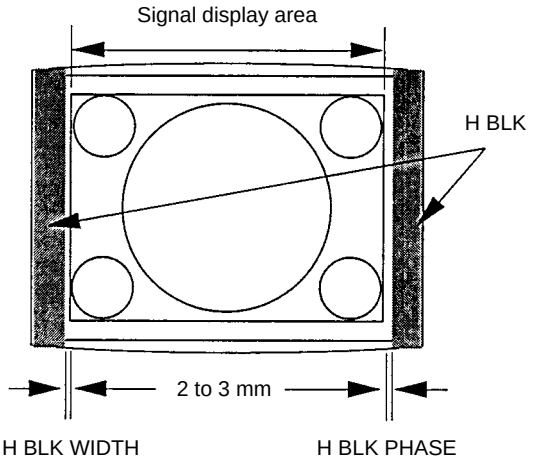


Fig. 1-6

[V. Blanking Adjustment]

• Preparation

1. Connect the monoscope signal of the signal formats that are shown in the following table, to the ANALOG Y/G input connector. Perform the V. blanking adjustment in the respective screen modes using the respective signal formats.

60 Hz system

Mode	Signal format	Screen mode	
MODE9	480/60p (525)	4 : 3	NORMAL
MODE13	480/60i (525)	4 : 3	NORMAL

50 Hz system

Mode	Signal format	Screen mode	
MODE23	575/50p(625)	4 : 3	NORMAL
MODE27	575/50i(625)	4 : 3	NORMAL

2. Increase the brightness by adjusting the BRIGHT control so that blanking becomes visible on screen.
   Note: The following adjustment menus are located in the directory under the DEFLECTION menu of the MAINTENANCE menu.
   V BLK TOP
   V SIZE
   V CENT

• V. Blanking Adjustment

1. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
2. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
3. Press the SHIFT button to set the SHIFT OFF. [The LED (orange) on top of the button turns off.]
4. Press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]
5. Adjust the V. SIZE data so that the 5% over-scan is obtained.
6. Take note of the present V. CENT data. After noting, adjust the V. CENT data so that the top of the raster becomes visible.
7. Adjust the V. BLK. TOP data so that the vertical blanking on top of the screen is positioned as closest as possible to the signal display area.
8. Return the V. CENT data to the original data.

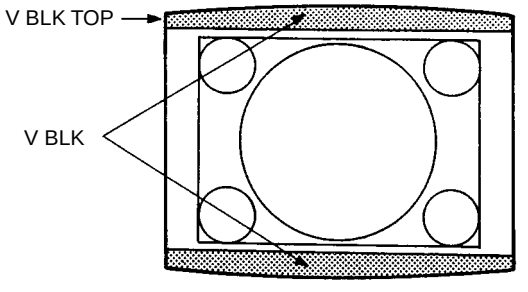


Fig. 1-7

[Linearity Adjustment]

• Linearity Adjustment (1)

1. Connect the 1080/60i (1125) cross-hatch signal to the ANALOG Y/G input connector.
2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
3. Press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
4. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
5. Press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]
6. Check that the picture is not slanted, that there are no top and bottom PIN distortion and horizontal trapezoidal distortion.
   Slanted picture :
   Adjust inclination of the DY.
   Horizontal PIN distortion :
   Adjust upper and lower neck twist of the DY.

http://getMANUAL.com

• Linearity Adjustment (2)

Note 1) Connect the monoscope signal or the cross-hatch signal having the following signal formats as shown in the table below, to the ANALOG Y/G input connector. Perform the linearity adjustment (2) in the respective screen modes using the respective signal formats.

60 Hz system

MODE	Signal format	Screen mode	
MODE1	1080/60i	16 : 9	NORMAL
MODE2	(1125)		UNDER SCAN
MODE3	1035/60i	16 : 9	NORMAL
MODE4	(1125)		UNDER SCAN
MODE5	720/60p	16 : 9	NORMAL
MODE6			UNDER SCAN
MODE7	480/60p	16 : 9	NORMAL
MODE8	(525)		UNDER SCAN
MODE9		4 : 3	NORMAL
MODE10			UNDER SCAN
MODE11	480/60i	16 : 9	NORMAL
MODE12	(525)		UNDER SCAN
MODE13		4 : 3	NORMAL
MODE14			UNDER SCAN

50 Hz system

MODE	Signal format	Screen mode	
MODE15	1080/48i	16 : 9	NORMAL
MODE16	(1125)		UNDER SCAN
MODE17	1080/50i	16 : 9	NORMAL
MODE18	(1125)		UNDER SCAN
MODE19	720/50p	16 : 9	NORMAL
MODE20			UNDER SCAN
MODE21	575/50P	16 : 9	NORMAL
MODE22	(625)		UNDER SCAN
MODE23		4 : 3	NORMAL
MODE24			UNDER SCAN
MODE25	575/50i	16 : 9	NORMAL
MODE26	(625)		UNDER SCAN
MODE27		4 : 3	NORMAL
MODE28			UNDER SCAN

Note 2) The following adjustment menus are located in the directory under the DEFLECTION menu of the MAINTENANCE menu.

H SIZE
H CENTER
H KEY BAL
H KEY
H PIN BAL
H PIN
H COR S
H COR PIN
H PIN
V SIZE
V CENTER
V LIN AMP
V LIN BAL

1. Connect the monoscope signal to the ANALOG Y/G input connector.
2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
3. To adjust the 4:3 mode of adjustment, press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
4. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
5. To select the NORMAL mode of adjustment, press the UNDER SCAN button (▭) to its OFF position to select the normal mode. [The green LED turns off.] To select the UNDER SCAN mode of adjustment, press the UNDER SCAN button (▭) to its ON position to select the under scan mode. [The green LED turns on.]
6. Adjust the H CENTER data so that the horizontal center of the picture comes to the horizontal center of the screen.
7. Adjust the V CENTER data so that the vertical center of the picture comes to the vertical center of the screen.
8. Connect the cross-hatch signal to the ANALOG Y/G input connector.
9. Adjust the respective V SIZE, V LIN BAL, V LIN AMP and H SIZE data so that the optimum picture is obtained as shown in Fig. 1-8.

Note: Do not adjust the V SIZE data when adjusting the MODEs 9, 13, 23 and 27.

10. Adjust the trapezoidal distortion and PIN distortion on both sides of picture using the H KEY BAL, H KEY, H PIN BAL and H PIN data respectively as shown in Fig. 1-9.
11. Adjust the corner “S” distortion and the corner PIN distortion on both sides of picture using the H CORS and H COR PIN data respectively as shown in Fig. 1-10.
12. Repeat the above-described steps of the linearity adjustment(2) until the optimum horizontal linearity and vertical linearity are obtained.

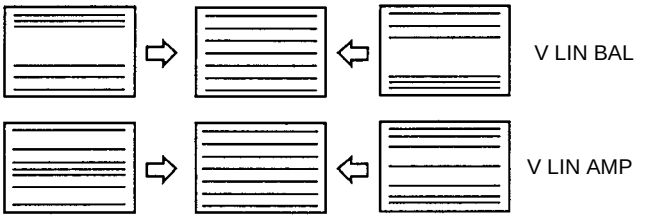


Fig. 1-8

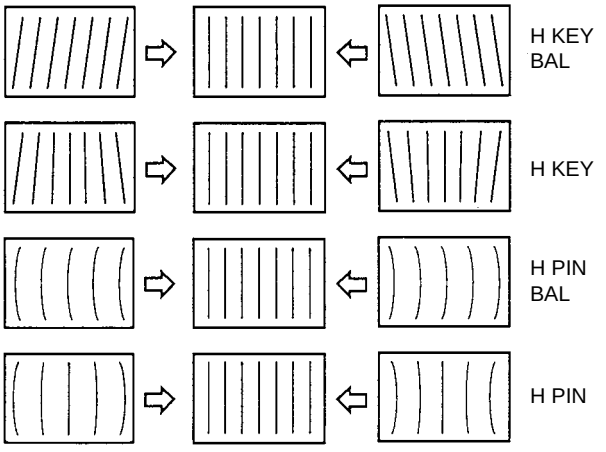


Fig. 1-9

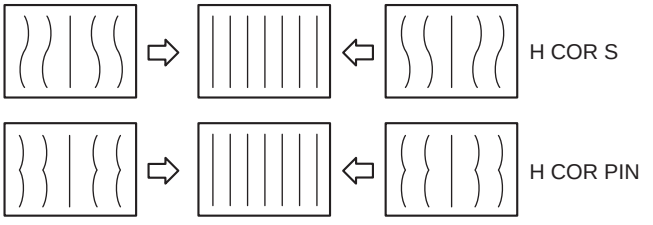


Fig. 1-10

[Convergence Adjustment]

• Preparation

1. Connect the 480/60p cross-hatch signal to the ANALOG Y/G input connector.
2. Press the SHIFT button to ON. [The LED (orange) on top of the button turns on.]
3. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
4. Press the SHIFT button to OFF. [The LED (orange) on top of the button turns off.]
5. Press the UNDER SCAN button (▣) to its OFF position to select the NORMAL mode. [The green LED turns off.]

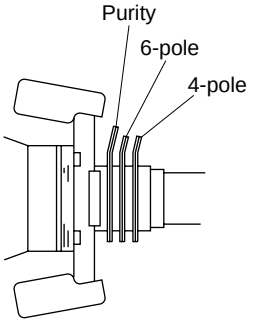


Fig. 1-11

[Static Convergence Adjustment]

• Horizontal Static Convergence Adjustment

1. Adjust RV701 on the C board so that the red dots and the green dots are correctly converged.
2. When the blue dot is mis-converged with respect to the red and green dots, implement the HMC (horizontal misconvergence) correction by adjusting the 4-pole magnet and the 6-pole magnet of the DY.

• Vertical Static Convergence Adjustment

1. Implement the VMC (vertical misconvergence) correction by adjusting the 4-pole magnet and the 6-pole magnet of the DY.

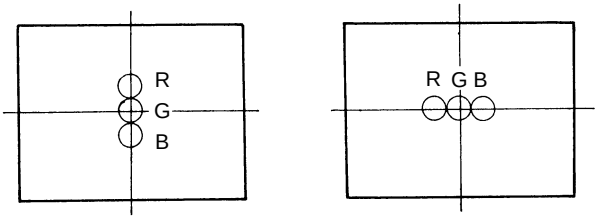


Fig. 1-12

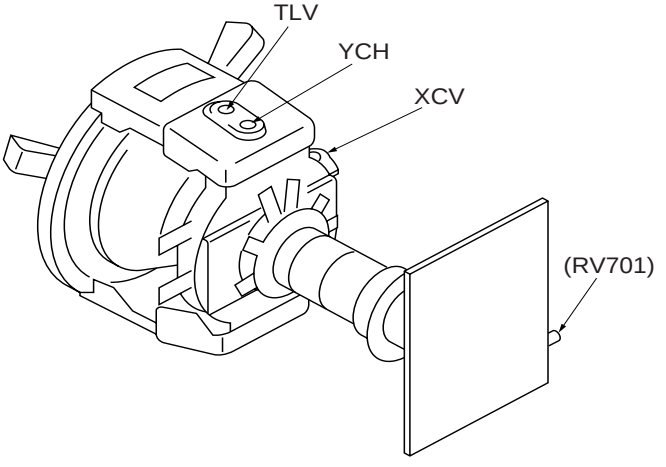


Fig. 1-13

[Dynamic Convergence Adjustment]

1. Minimize the vertical misconvergence in the left-most end of the center of a screen and in the right-most end of the center of a screen by the DY correction reactor XCV as shown in Fig. 1-14.
2. Minimize the vertical misconvergence in the top of a screen and in the bottom of a screen by the DY correction reactor TLV as shown in Fig. 1-14.

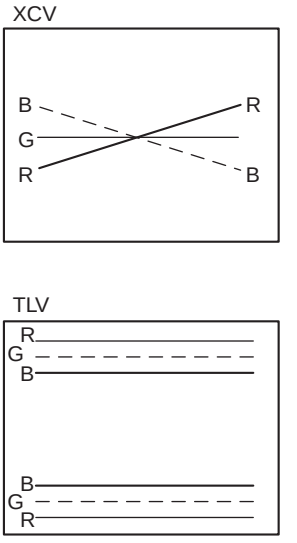


Fig. 1-14

[G2 Adjustment]

1. Turn off the POWER switch.
2. Disconnect the connector CN701 from the C board.
3. Apply the following DC voltage to pin-1, pin-3 and pin-5 of CN701 on the C board respectively.
   100 ±2 V
4. Turn on the POWER switch.
5. Adjust the SCREEN control of FBT to the point of immediately before the blanking lines disappear on screen.
6. Turn off the POWER switch.
7. Remove the DC voltages that are applied in step 3, from the C board
8. Re-connect the connector CN701 to the C board.

[White Balance Adjustment]

1. Outline of the white balance adjustment and calibration of the color analyzer that is used for the white balance adjustment are described first.

1.1 The parameter that converts the RGB drive voltage of a CRT to the chromaticity coordinate is acquired.

This monitor has the copy function of the color temperature data between two or more monitors.
However, the CRT drive voltage are unique in every monitor because it is different depending on each CRT. Therefore, the same color temperature cannot be obtained in multiple monitors even though the same drive voltage is given to them. It means that the data that is used to copy the color temperature, must be the xyY chromaticity coordinate or similar data that does not depend on each CRT, unlike the CRT drive that depends on each CRT.
When the D93 MANUAL adjustment is implemented using the MAINTENANCE/SYSTEM/COLOR TEMP menu of the SYSTEM CONFIG menu, the parameter that converts the CRT drive voltage to the chromaticity coordinate is created while the adjustment is implemented. This parameter is used when copying the color temperature data to other monitors as shown.

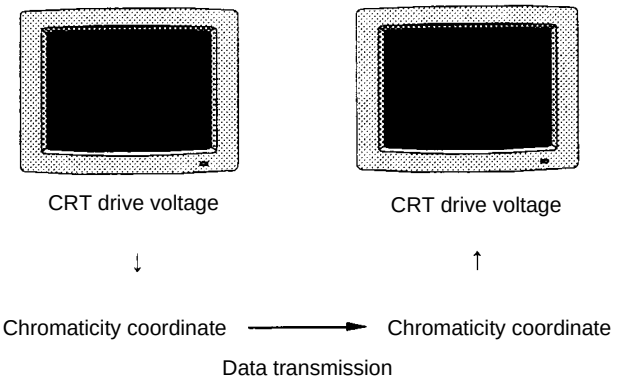


Fig. 1-15

1.2 D65 color temperature adjustment

1.3 Copying the color temperature data to the STD color temperature, COLOR1 color temperature and COLOR2 color temperature.

- On calibration of the color analyzer
  When color temperature of any monitor is measured by two or more color analyzers, these color analyzers show different measurement values even though the object of measurement is the same. Also the measurement value of color analyzer changes as time elapses.
  Therefore, any color analyzer must be calibrated so that it shows the correct measurement value of the following chromaticity coordinate before using the analyzer.

	x	y	y (cd/m^2)
D65	0.313	0.329	2.7
	0.313	0.329	120
D93	0.283	0.297	2.7
	0.283	0.297	120

2. Preparation for Adjustment

2.1 Connect the 480/60i (525) WINDOW signal to the ANALOG Y/G input connector.

2.2 Connect the RS-232C connector of a color analyzer CA-100 with the OPTION connector of a monitor using the cable that is shown by section "3-1. Set-Up Adjustment When CRT is Replaced - Required tools and measuring instruments, item 8".

2.3 Set up the CA-100 as described below. Attach the measurement probe of the CA-100 to the center of the CRT screen.

Display mode	xyY mode
Baud rate	9600

3. White Balance Adjustment

3.1 White Balance Adjustment (1)

1. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
2. Press the MONO ON button to select the B/W mode. [The green LED turns on.]
3. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
4. Select VIDEO menu of the MAINTENANCE menu.
5. Take note of the SUB CONTRAST data. Then set 100 to the SUB CONTRAST data.
6. Select SYSTEM/COLOR TEMP menu of the MAINTENANCE menu.
7. Select D93 of the SYSTEM/COLOR TEMP menu. Then cover the entire CRT screen surface with a black blind cloth. Select the MANUAL adjustment item and adjust the white balance until the following value is obtained.
   x = 0.283
   y = 0.297
8. Select D65 of the SYSTEM/COLOR TEMP menu. Then cover the entire CRT screen surface with a black blind cloth. Select the MANUAL adjustment item and adjust the white balance until the following value is obtained.
   x = 0.313
   y = 0.329
9. Select the SYSTEM/COLOR TEMP/COPY/OTHER VALUE menu.
10. After selecting the STD item of the COLOR TEMP menu, select D93. Copy the D93 color temperature data to STD.
11. After selecting the COLOR1 item of the COLOR TEMP menu, select D65. Copy the D65 color temperature data to COLOR1.
12. After selecting the COLOR2 item of the COLOR TEMP menu, select D93. Copy the D93 color temperature data to COLOR2.
13. Select VIDEO menu of the MAINTENANCE menu.
14. Return the SUB CONTRAST data to the original data.
15. Press the MONO button to the OFF position to cancel the B/W mode. [The green LED turns off.]

3.2 Sub Contrast Adjustment

1. Connect the 480/60i (525) WINDOW signal to the ANALOG Y/G input connector.
2. Attach the luminance meter to the center of the CRT screen.
3. Select STD using the COLOR TEMP menu of the INPUT CONFIG menu.
4. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
5. Select SUB CONTRAST menu of the VIDEO menu.
6. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
7. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
   Press the UNDER SCAN button (▣) to its ON position to select the under scan mode. [The green LED turns on.]
8. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
9. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 ON button [to turn on the LED (orange)] to select the 16:9 mode.
10. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
11. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
    Press the UNDER SCAN button (▣) to its ON position to select the under scan mode. [The green LED turns on.]
12. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
13. Press the UNDER SCAN button (▣) to its ON position to select the under scan mode. [The green LED turns on.]
14. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.

15. Connect the 1080/60i 100 IRE WINDOW signal to the ANALOG Y/G input connector.
16. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
17. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
    Press the UNDER SCAN button (▣) to its ON position to select the under scan mode. [The green LED turns on.]
18. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
19. Press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]
20. Connect the 480/60p (525P) 100IRE WINDOW signal to the to ANALOG Y/G input connector.
21. Press the SHIFT ON button [to turn on the LED (orange) on top of the SHIFT button]. Press the 16:9 OFF button [to turn off the LED (orange)] to select the 4:3 mode.
22. Press the SHIFT OFF button [to turn off the LED (orange) on top of the SHIFT button].
    Press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]
23. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
24. Press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]
25. Adjust SUB CONTRAST so that luminance becomes 120 cd/m^2.
26. Press the UNDER SCAN button (▣) to its OFF position to select the normal mode. [The green LED turns off.]

3.3 White Balance Adjustment (2)

1. Connect the 480/60i (525) 20 IRE WINDOW color difference signal to the ANALOG Y/G input connector.
2. Select STD using the COLOR TEMP menu of the INPUT CONFIG menu.
3. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
4. Select the VIDEO menu.
5. Increase the CHROMA control to its maximum.
6. Adjust white balance by adjusting the PR/R. BLACK and PB/B. BLACK menus of the VIDEO menu.
   x = 0.283
   y = 0.297

3.4 White Balance Adjustment (3)

1. Connect the 1080/60i (1125) 20 IRE WINDOW color difference signal to the ANALOG Y/G input connector.
2. Select STD using the COLOR TEMP menu of the INPUT CONFIG menu.
3. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
4. Select the VIDEO menu.
5. Increase the CHROMA control to its maximum.
6. Adjust white balance by adjusting the PR/R. BLACK and PB/B. BLACK menus of the VIDEO menu.
   x = 0.283
   y = 0.297

3.5 White Balance Adjustment (4)

1. Turn off the main POWER switch.
2. Insert the BKM-142HD into the SLOT 2.
3. Connect the HD-SDI 20 IRE WINDOW signal to the BKM-142HD.
4. Turn on the main POWER switch.
5. Select HD-SDI using the FORMAT menu of the INPUT CONFIG menu.
6. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
7. Select the VIDEO menu.
8. Increase the CHROMA control to its maximum.
9. Adjust white balance by adjusting the PR/R. BLACK and PB/B. BLACK menus of the VIDEO menu.
   x = 0.283
   y = 0.297

3.6 White Balance Adjustment (5)

1. Turn off the main POWER switch.
2. Insert the BKM-120D into the SLOT 2.
3. Connect the D1-SDI 20 IRE WINDOW signal to the BKM-120D.
4. Turn on the main POWER switch.
5. Select D1-SDI using the FORMAT menu of the INPUT CONFIG menu.
6. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
7. Select the VIDEO menu.
8. Increase the CHROMA control to its maximum.
9. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.
   x = 0.283
   y = 0.297

3.7 White Balance Adjustment (6)

1. Turn off the main POWER switch.
2. Insert the BKM-127W into the SLOT 2.
3. Connect the NTSC 20 IRE WINDOW signal to the BKM-127W.
4. Turn on the main POWER switch.
5. Select NTSC, PAL using the FORMAT menu of the INPUT CONFIG menu.
6. Select MAINTENANCE menu of the SYSTEM CONFIG menu.
7. Select the VIDEO menu.
8. Increase the CHROMA control to its maximum.
9. Adjust white balance by adjusting the PR/R BLACK and PB/B BLACK menus of the VIDEO menu.
   x = 0.283
   y = 0.297

Section 4
Safety Related Adjustments

This section describes the adjustment procedure that is required when the safety related parts are replaced.

[Preparation]

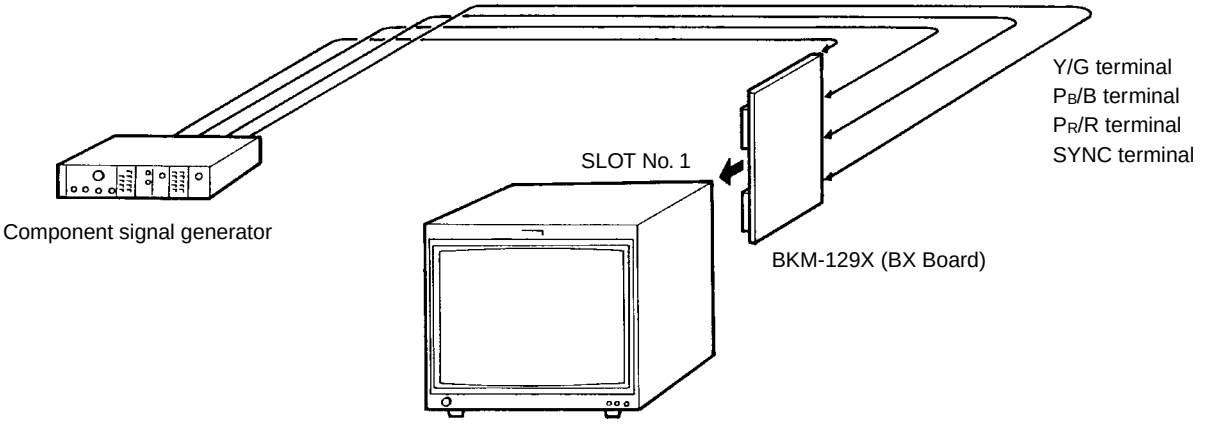
• Required tools and measuring equipment

1. Signal generator
   YPBYPR signal generator
   • 1080/60i (1125) : SMPTE274M standard
   • 480/60i (525) : ITU601 (Refer to page 1-29)
2. Electrostatic voltmeter: Singer ESH-27X or ESH-23X or equivalent
3. Digital voltmeter
4. 200 kΩ variable resistor
5. 50 kΩ variable resistor
6. Ammeter

• Set the INPUT CONFIGURATION menu

Set the INPUT CONFIGURATION menu of the SETUP menu as shown below unless otherwise specified.

FORMAT ..... YPBPR
SLOT NO 1
INPUT NO 1
SYNC MODE ..... INT
APEARTURE VALUE 100
CHANNEL NAME ..... PROG
COLOR TEMP ..... STD
H PHASE 000
MARKER PHASE 000
MARKER WIDTH 000



BVM-D9H1U/D9H5U/D9H1E/D9H5E/D9H1A/D9H5A

+B (12 V) Voltage Check

When the following parts (the parts to which the ◪ mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

◪ G board IC666, IC603, IC690, PH601, T602, T604

1. Connect a digital voltmeter between pin-1 and pin-2 (GND) of CN1602 on the D board.
2. Turn on the main power.
3. Connect the 1080/60i monoscope signal (see note) to input connector.
   Note: 1125 (1080) monoscope signal
4. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
5. Set the BRIGHTNESS and CONTRAST buttons to their mechanical center positions.
6. Check that the following DC voltage appears.
   13.0 ± 1.0 V
7. Turn off the main power.
8. Disconnect the digital voltmeter.

High Voltage Regulator Check

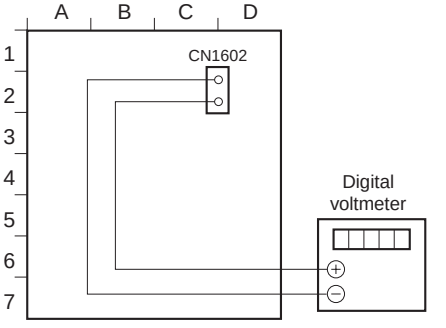
When the following parts (the parts to which the ◪ mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

◪ P board IC502, IC508, R540, R541, R543, R544, R549, R550, R555, R599

1. Turn off the main power.
2. Connect an electrostatic voltmeter to the anode cap of CRT tube.
   • Electrostatic voltmeter: It must have already been calibrated to have the input impedance of 2×10^9 Ω or more.
3. Turn on the main power.
4. Connect the 1080/60i monoscope signal (see note) to input connector.
   Note: HD 1125 signal
5. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
6. Set the BRIGHTNESS and CONTRAST buttons to their mechanical center positions.
7. Check that the following high voltage appears.
   15.5 ± 0.4 kV
8. Turn off the main power.
9. Disconnect the electrostatic voltmeter.

[Connection]

D board (A SIDE)



http://getMANUAL.com

High Voltage Hold-Down Check

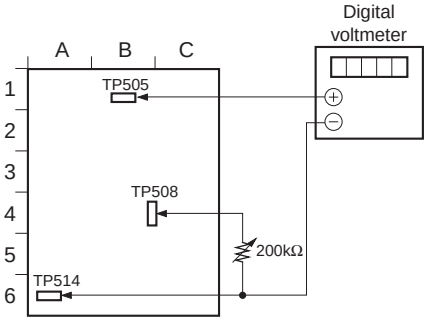
When the following parts (the parts to which the ◪ mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

◪ P board IC509, IC511, D527, R539, R577, R578, R579, R580, R592, R588, R587

1. Turn off the main power.
2. Connect a digital voltmeter between TP505 and TP514 (GND) of P board.
3. Connect a 200 kΩ variable resistor between TP508 and TP514 (GND) of P board.
   [Adjust the 200 kΩ variable resistor to its maximum resistance value.]
4. Turn on the main power.
5. Connect the 480/60i all black signal (see note) to input connector.
   Note: NTSC all black signal
6. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
7. Set the BRIGHTNESS and CONTRAST buttons to their MIN positions.
8. Confirm that the raster disappears from the CRT screen when the DC voltage at TP505 reaches the following voltage as the 200 kΩ variable resistor is turned to decrease its resistance value gradually.
   4.90 to 5.10 V
9. Turn off the main power.
10. Remove the 200 kΩ variable resistor from TP508.
11. Turn on the main power.
12. Confirm that the DC voltage at TP505 is as follows.
    3.95 ± 0.15 V
13. Connect the 480/60i entire white signal to input connector.
14. Set the BRIGHTNESS and CONTRAST buttons to their MAXIMUM positions.
15. Confirm that the DC voltage at TP505 is as follows.
    4.25 ± 0.20 V
16. Disconnect the digital voltmeter.

[Connection]

P board (Side A)



ABL Check

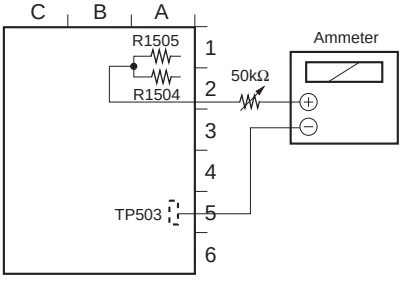
When the following parts (the parts to which the ◪ mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

◪ P board R1507, R1508, R1509
◪ B board R1461, R1464, R1467, R1469, R1470, R1471

1. Turn off the main power.
2. Disconnect the CN504 connector from the P board.
3. Connect a DC ammeter between pin-1 and pin-3 of CN504 on the P board
   [Pin-3 is the positive (+) side.]
4. Turn on the main power.
5. Connect the 1080/60i all white signal (see note) to input connector.
   Note: 1125 (1080) entire white signal
6. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
7. Check to see that ABL operates when the BRIGHTNESS and CONTRAST buttons are turned from their MIN positions toward the MAX positions. [Check that the maximum value of the DC ammeter reading is within the range as shown below.]
   0.50 to 0.60 mA
8. Turn off the main power.
9. Disconnect the DC ammeter.
10. Connect CN504 connector to the P board again.

[Connection]

P board (Side B)



Beam Current Protector Check

When the following parts (the parts to which the ◪ mark is attached on the schematic diagram) are replaced, be sure to perform the following checks.

◪ P board R582, R583, R584, R585, R586, R1504, R1505, R1506

1. Turn off the main power.
2. Connect a DC ammeter and a 50 kΩ variable resistor in series between the junction point of R1504 and R1505, and TP513 (GND) on the P board.
   [The junction point of R1504 and R1505 is the positive (+) side. Adjust the 50 kΩ variable resistor to its maximum resistance beforehand.]
3. Turn on the main power.
4. Connect the 1080/60i entire black signal (see note) to input connector.
   Note: 1125 (1080) entire black signal
5. Push the BRIGHTNESS and CONTRAST buttons to their MANUAL positions (to turn the green LEDs on the buttons.)
6. Set the BRIGHTNESS and CONTRAST buttons to their mechanical center positions.
7. Confirm that the raster disappears from the CRT screen when the DC ammeter reaches the following value as the 50 kΩ variable resistor is turned to decrease its resistance value gradually.
   550 μA
8. Turn off the main power.
9. Remove a 50 kΩ variable resistor and a DC ammeter.

Section 5
Circuit Adjustments

5-1. B Board Adjustments

This section describes the following adjustments that are required when the parts are replaced or maintenance is performed in the B board.

1. RGB signal adjustment
2. 15k YPBPR SMPTE (709) signal adjustment
3. 15k YPBPR SMPTE (601) signal adjustment
4. 15k YPBPR BETACAM SETUP 0 (601) signal adjustment
5. 15k YPBPR BETACAM SETUP 7.5 (601) signal adjustment
6. 33k YPBPR SMPTE (709) Signal Adjustment

Control Settings

- Set the INPUT CONFIGURATION menu of the SETUP menu as shown below.
  FRMAT ..... YPBPR
  SLOT NO 1
  INPUT NO 1

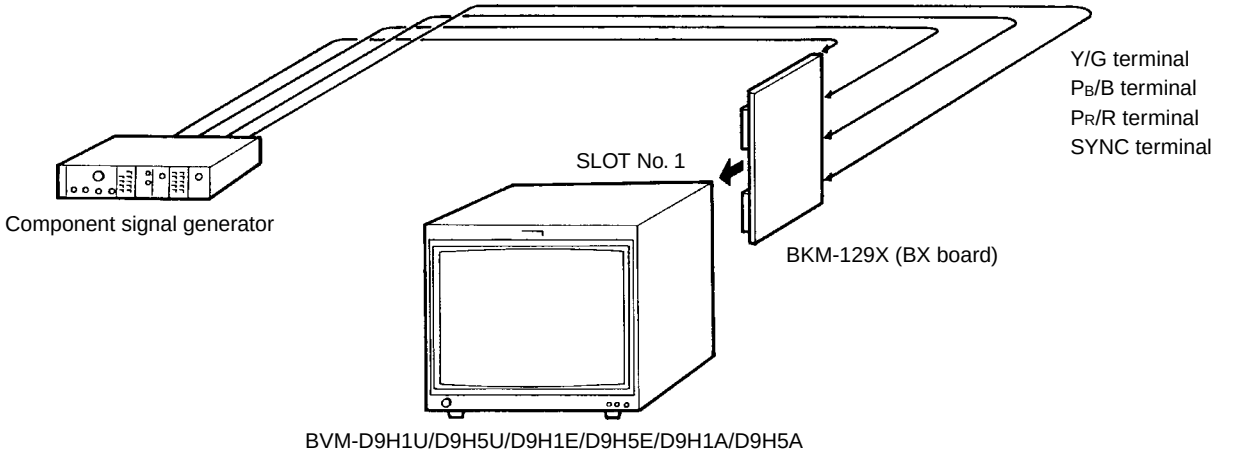
- Set “128” to the CHROMA data using the CHROMA control knob.

- Perform the following operaion using the SYSTEM CONFIG menu.
  Select the B BOARD using the RE-LOAD FACTORY DATA of the SYSTEM menu.

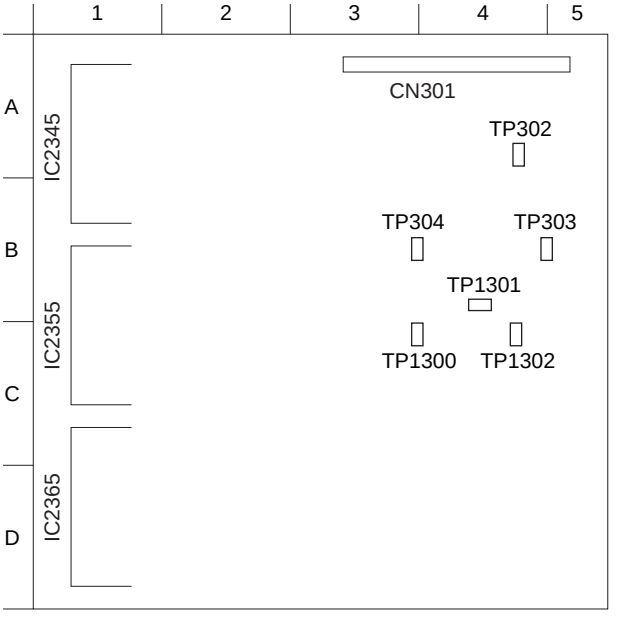
Equipment Required

Name	Main Specifications	Model Name
Signal generator	15 kHz/60 Hz RGB	VG-854 or equivalent
	15 kHz/60 Hz YPBPR SMPTE (709)	
	15 kHz/60 Hz YPBPR SMPTE (601)	
	15 kHz/60 Hz YPBPR BETACAM SETUP 7.5 (601)	
	33 kHz/60 Hz YPBPR SMPTE (709)	
Oscilloscope	Frequency: DC to 150 MHz or more	TEKTORONIX 2445A
	Dual trace	or equivalent

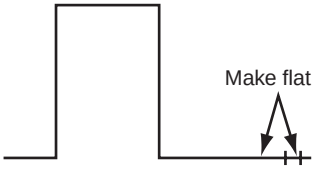
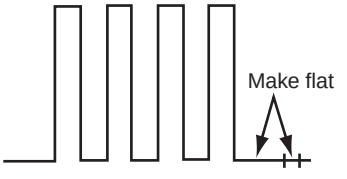
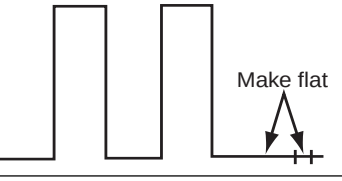
Connection (1)



Connection (2)
B Board -side A-

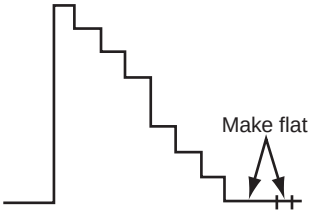
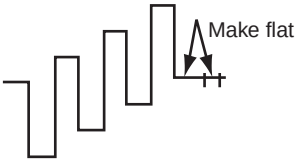
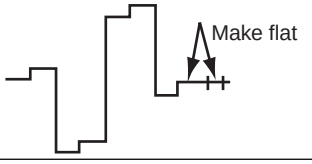


Adjustment Procedure
1. RGB Signal Adjustment

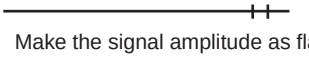
Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz RGB 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select RGB. • Connect an oscilloscope to TP302.	Adjust the GREEN waveforms to have the same amplitude at TP302. Level difference: 0 ±10 mV 	Use the adjustment menu Y/G BLACK (40H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP303.	Make flat the pedestal portion of the BLUE waveform at TP303. Level difference: 0 ±10 mV 	Use the adjustment menu PB/B BLACK (30H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP304.	Make flat the pedestal portion of the RED waveform at TP304. Level difference: 0 ±10 mV 	Use the adjustment menu PR/R BLACK (20H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

2. 15k YPBPR SMPTE (709) Signal Adjustment

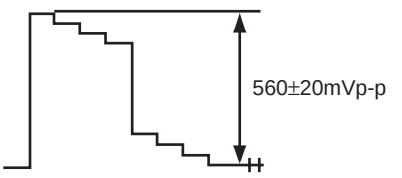
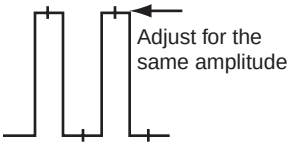
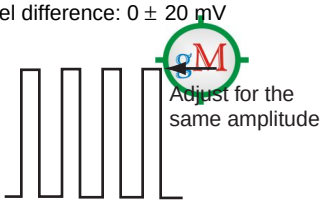
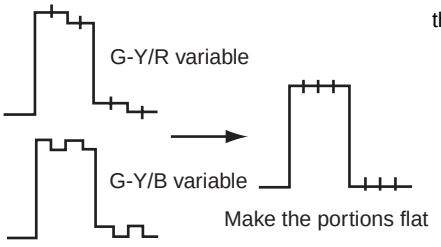
2-1. BLACK Level Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 709 for YPBPR MATRIX. • Connect an oscilloscope to TP302.	Make flat the pedestal portion of the Y-signal waveform at TP302. Level difference: 0 ± 10 mV 	Use the adjustment menu Y/G BLACK (41H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP303.	Make flat the pedestal portion of the PB waveform at TP303. Level difference: 0 ± 10 mV 	Use the adjustment menu PB/B BLACK (32H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP304.	Make flat the pedestal portion of the PR waveform at TP304. Level difference: 0 ± 10 mV 	Use the adjustment menu PR/R BLACK (22H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

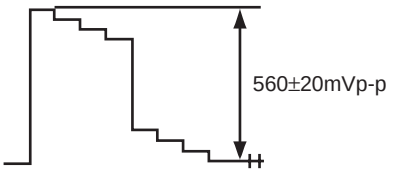
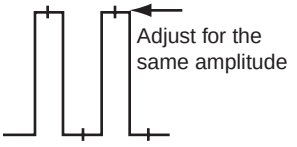
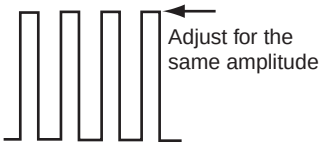
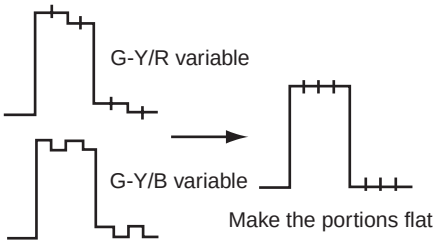
2-2. CHROMA Leak Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 709 for YPBPR MATRIX. • Use the CHROMA knob to set “0” to the CHROMA data. • Connect an oscilloscope to TP303.	Make flat the PB waveform at TP303. Level difference: 0 ± 20 mV  Make the signal amplitude as flat as possible.	Use the adjustment menu CHROMA PB (11H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP304.	Make flat the PR waveform at TP304. Level difference: 0 ± 20 mV  Make the signal amplitude as flat as possible.	Use the adjustment menu CHROMA PR (10H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Set “128” to the CHROMA data using the CHROMA control knob.		

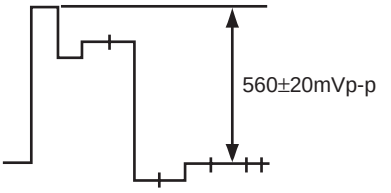
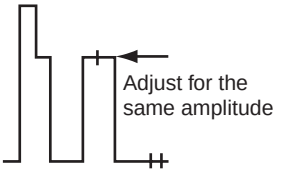
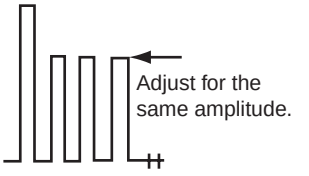
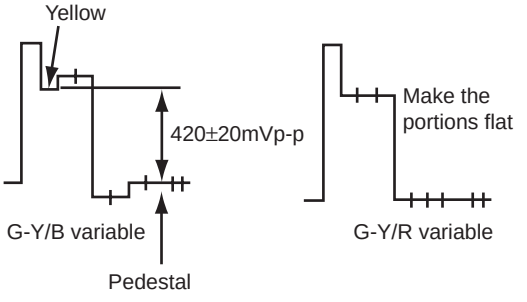
2-3. MATRIX Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 709 for YPBPR MATRIX. • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: 560 ± 20 mVp-p 	Use the adjustment menu Y LEVEL (50H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: 0 ± 20 mV 	Use the adjustment menu PR LEVEL (60H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: 0 ± 20 mV 	Use the adjustment menu PB LEVEL (80H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 4 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301 Level difference: 0 ± 20 mV 	Use the adjustment menu G-Y/R (70H) and G-Y/B (90H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

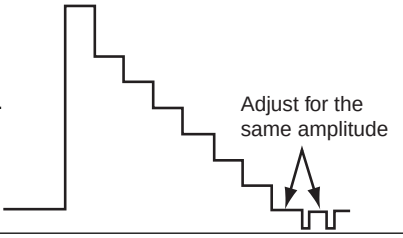
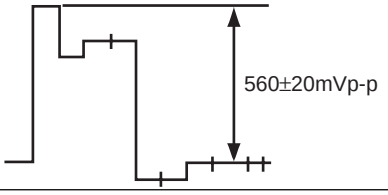
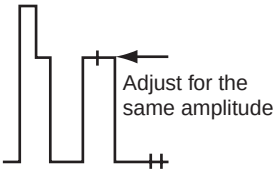
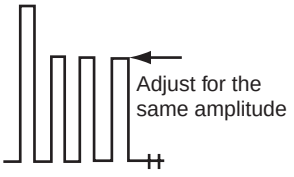
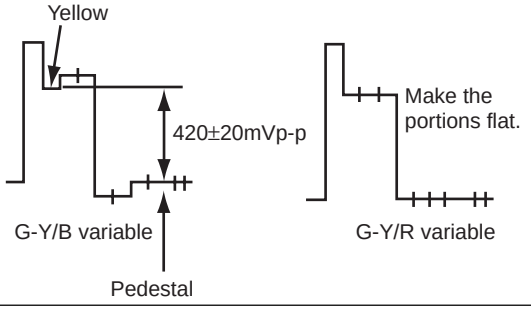
3. 15k YPBPR SMPTE (601) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR SMPTE (601) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. Set 601 for YPBPR MATRIX. • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: 560 ± 20 mVp-p 	Use the adjustment menu Y LEVEL (51H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: 0 ± 20 mV 	Use the adjustment menu PR LEVEL (62H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1302	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: 0 ± 20 mV 	Use the adjustment menu PB LEVEL (82H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 4 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301 : Level difference: 0 ± 20 mV 	Use the adjustment menu G-Y/R (71H) and G-Y/B (91H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

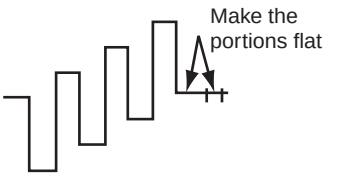
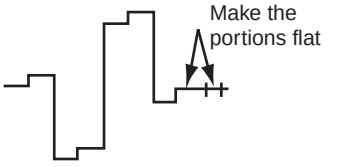
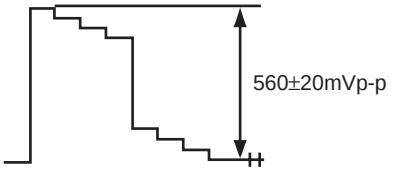
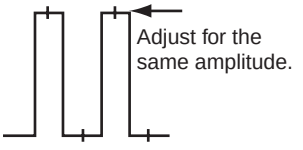
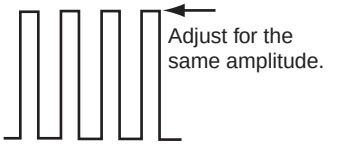
4. 15k YPBPR BETACAM SETUP 0 (601) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR BETACAM SETUP 0 (601) 75% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR BETA 0. • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: 560 ± 20 mVp-p 	Use the adjustment menu Y LEVEL (52H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: 0 ± 20 mV 	Use the adjustment menu PR LEVEL (64H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: 0 ± 20 mV 	Use the adjustment menu PB LEVEL (84H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 4 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301. Amplitude between YELLOW and pedestal: 420 ± 20 mVp-p Make flat the waveform: Level difference: 0 ± 20 mV 	Use the adjustment menu G-Y/R (72H) and G-Y/B (92H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

5. 15k YPBPR BETACAM SETUP 7.5 (601) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 15 kHz/60 Hz YPBPR BETACAM SETUP 7.5 (601) 75% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR BETA 7.5. • Connect an oscilloscope to TP302.	Make flat the pedestal portion of the Y-signal waveform at TP302. Level difference: 0 ± 10 mV 	Use the adjustment menu Y/G BLACK (42H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP1301.	GREEN waveform amplitude at TP1301: 560 ± 20 mVp-p 	Use the adjustment menu Y LEVEL (53H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: 0 ± 20 mV 	Use the adjustment menu PR LEVEL (65H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 4 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: 0 ± 20 mV 	Use the adjustment menu PB LEVEL (85H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 5 • Connect an oscilloscope to TP1301.	Make flat the GREEN waveform at TP1301. Amplitude between YELLOW and pedestal: 420 ± 20 mVp-p Make flat the waveform: Level difference: 0 ± 20 mV 	Use the adjustment menu G-Y/R (73H) and G-Y/B (93H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

6. 33k YPBPR SMPTE (709) Signal Adjustment

Status During Adjustment	Specifications	Adjustment Point
Step 1 • Input the 33 kHz/60 Hz YPBPR SMPTE (709) 100% color bar signal. • Use the FORMAT item of the INPUT CONFIG menu to select YPBPR SMPTE. • Connect an oscilloscope to TP303.	Make flat the PB waveform at TP303. Level difference: 0 ± 10 mV 	Use the adjustment menu PB/B BLACK (33H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 2 • Connect an oscilloscope to TP304.	Make flat the PR waveform at TP304. Level difference: 0 ± 10 mV 	Use the adjustment menu PR/R BLACK (23H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 3 • Connect an oscilloscope to TP1301.	Check amplitude of the GREEN waveform at TP1301: 560 ± 20 mVp-p 	
Step 4 • Connect an oscilloscope to TP1300.	Adjust the RED waveforms to have the same amplitude at TP1300. Level difference: 0 ± 20 mV 	Use the adjustment menu PR LEVEL (61H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.
Step 5 • Connect an oscilloscope to TP1302.	Adjust the BLUE waveforms to have the same amplitude at TP1302. Level difference: 0 ± 20 mV 	Use the adjustment menu PB LEVEL (81H) that is located under the directory of the VIDEO menu of the MAINTENANCE menu.

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Section 6
Circuit Descriptions

This section describes the circuit operations of the following boards used in the BVM-D9H1/D9H5.

6-1. G board
6-2. B board
6-3. MA board
6-4. MB board
6-5. D board P1 and P2
6-6. P board
6-7. HA, HB and HC boards
6-8. HD board

6-1. G Board

Power supply of this monitor consists of the following two switching regulators.

1. The power factor improvement regulator that is used to comply with the power supply high frequency harmonics regulations.
2. The main regulator that supplies the power to the signal system, the deflection circuit and high voltage circuit.

1. Power Factor Improvement Circuit

The power factor improvement circuit of this monitor uses the active filter IC module (IC601) of the current-threshold type boost-chopper system to comply with the power supply high frequency harmonics regulations. In this monitor, the output voltage Vpfc becomes always higher than the peak value of the input voltage to the power circuit. The output voltage Vpfc of this monitor is set to about 370 V.

The power factor improvement circuit consists of IC666, T602, C630 and C615.

IC666 is a module IC in which the control IC, the switching FET, the boost diode and input/output voltage detectors are built in.

Basic operation of the power factor improvement block is as follows. When the Vcc power is supplied to IC666, the FET inside the module IC666 is turned on and an electric current starts to flow in the primary winding of T602 and the FET. This current increases with the slope of Vin (rms)/L where L is the primary side's inductance of T602. This FET current is monitored by the source current detection resistor that is connected between pin-4 and pin-7 of IC666. When this FET current reaches the set value that is specified by the multiplier inside the control IC, the FET is turned off. Then an electric current flows through the boost diode where the current decreases with the slope of -(Vpfc - Vin (rms))/L. When this current reaches 0, the FET is turned on. The current-threshold operation is thus realized by the above described circuit operations.

In other words, the circuit operations that are described, are performed as one-operation-cycle all the time while the power is on. When you observe the circuit operations as described above, during only the half-wave period of commercial power line frequency, you will notice that ON/OFF timing of the FET is controlled by the control IC so that the envelope of the peak values of the choke current is proportional to the half-wave of the sine waveform of the power line frequency. As the result of this control, waveform of the input voltage and that of the output voltage become similar so that the power factor is improved.

2. Main Regulator

The separately excited current composite resonance system is used for the main regulator. The power regulation with high efficiency and low noise is thus realized. The main regulator consists of IC603, IC690, T604, C644, C623 and the secondary side rectifier circuit of T604. IC603 is a multiple chip module in which the four chips of the control block, the FET drive block and the switching FET block (high side and low side) are connected by bonding wire inside the IC. The main regulator has the following circuit configuration. A half-bridge rectifier is constructed by the two FET switches, the two capacitors C644 and C623, and the transformer T604 for the input voltage Vpfc. The secondary side of the transformer has the full wave rectifier having the center tap.

IC603 receives the control signal from IC690 that performs the constant voltage control over the +13 V line through the isolator PH601. The control signal changes the oscillating frequency of IC603 so that the constant voltage control is realized.

6-2. B board

1. Clamp Circuit (1)

The signal that is selected by the option board is input to CN301.

IC300 (1/3) (analog switch) is turned ON by the Y-CLP-P pulse. As a result, the pedestal voltage of the Y/G signal is sampled-and-held. In IC303, the sampled-and-held voltage and the reference voltage (Y/G BLACK voltage) are compared so that the error voltage is used to control the bias current of the Y/G signal clamp amplifier (Q300 to Q302) so that the pedestal voltage of the Y/G signal is clamped to a fixed voltage.

The same clamp operation is performed for the PB/B and PR/R signals but the C-CLP-P pulse is used as the clamp pulse.

2. Matrix Circuit

The Y, R-Y and B-Y signals are converted to the R, G and B signals by the matrix circuit during the Y/PB/PR mode. IC306 is the Y-level adjustment amplifier. IC307 and IC308 are the chroma level adjustment amplifier. The R-signal is generated by adding the Y-signal to the R-Y signal that has passed IC400 (PR gain control amplifier). The G-signal is generated by adding the R-Y signal that has passed IC400 (PR gain control amplifier), the B-Y signal that has passed IC401 (PB gain control amplifier) and the Y-signal that is inverted and amplified. These signals are added at Q463. The B-signal is generated by adding the Y-signal to the B-Y signal that has passed IC401 (PB gain control amplifier).

3. RGB Selector Switch

IC1300 (1/3), IC1302 (1/3) and IC1303 (1/3) are the selector switch selecting either the RGB signal or the YPBPR signal (matrix circuit). Output of the selector switch is R, G and B signals.

4. Clamp Circuit (2)

The R-signal is sampled-and-held by the timing pulse of the deflection system.

IC1305 compares the sampled R-signal with the reference signal. The error voltage of the comparator controls the DC bias of the R-signal amplifiers (Q1300 to Q1302) so that the pedestal level is kept to a constant DC level all the time. The same clamp operation is performed in the G and B signals in the same way.

5. OSD Insertion Circuit

The on-screen display of the R-signal is realized by inserting the OSD blanking with IC1300 (2/3) and by inserting the OSD characters with IC1304 (1/3). The WINDOW signal that is used during the AUTO W/B adjustment is also created by the character generator, and uses the same signal line in the same way of the character display. The same insertion operation is performed in the G and B signals in the same way.

6. CUT-OFF Circuit

Cut-off of the R-signal is performed by IC1304 (2/3, 3/3). The same cut-off operation is performed in the G and B signals in the same way.

7. CXA1739 Peripheral Circuit

The RGB signal is input during the normal operation and the color difference signal is input during the blue-only mode.

8. ABL Circuit

The ABL circuit consists of Q1460 for ABL, and Q1461 for BRT ABL.

The ABL voltage from the deflection block is input the respective emitters of Q1460 and Q1461. The voltage-divided DC voltage of the ABL signal is input the respective bases of Q1460 and Q1461. Their collectors are connected to IC1401 pin-46 (PIC CONT) and pin-7 (BRT CONT) respectively. When these transistors are turned on, the ABL operation can be performed by decreasing their respective control voltages.

9. AUTO CHROMA PHASE

The signals that are output from IC1401 are selected by IC2380. Only the sample pulse portion of the selected signal is sampled by IC2381 and is compared with the output by IC2382. The error signal from the comparator is fed back to DAC through IC2383 and automatically controls the PB LEVEL or the R LEVEL until the output agrees with the sampled level.

10. B1 Board

The B1 board is an aperture correction circuit.
The aperture correction performs the frequency compensation at 5 MHz when the input signal is 480/60i and 575/501 with DL400/DL401. It performs the frequency compensation at 16 MHz with DL402 and DL403 when any other signals are input.
DL404 and DL405 are the delay lines that correct the delay amount of the Y-signal. The PB and PR signals are corrected of their delay by DL501, DL502, DL503 and DL504.
Amount of compensation can be varied by 2 to 6 dB when the APT is ON using the IC450 aperture correction amplifier.

11. Sync Separator Circuit/B2 Board

The sync separator circuit consists of the sync AGC circuit and the B2 board.
Either the input sync signal in the modes of 480/60i and 575/50i or that in any other modes, is selected by IC3301 (2/3), (3/3), Q3302 and Q3303. The sync signal is separated by the SYNC AGC circuit of Q3304 to Q3319.
Either INT sync or EXT sync is selected by IC3301 (1/3).
In the B2 board, the equalizing pulses are extracted by IC3901, the H. sync pulse is separated by the H. SYNC SEP circuit consisting of IC3904, IC3905, IC3906 and IC3907. The V. sync pulse is separated by the V. SYNC SEP. circuit consisting of Q3905, Q3907, Q3908.
The switch IC3902 is the selector switch that selects either the internal sync separator output or the already separated H. and V. sync signals that are input when the SDI signal is used.

12. Drive circuit

IC2345 is the R-signal drive circuit.
Q2377 is the auto cut-off circuit. Output pulse form Q2377 flows through R3363 through Q2346 when Q2377 is turned ON.
The reference pulse that is current-to-voltage converted by R3363 is input to IC1401 pin-25 through a buffer in the B board in order to activate the auto cut-off circuit.
The same circuit operation is applied to the G-signal circuit and the B-signal circuit.

6-3. MA board

1. System Control

IC106 (system control CPU) controls the monitor in accordance with the program that is installed in IC108 (flash EEPROM). The program in IC108 can be re-written by the boot loader program in IC106. Various settings are saved in the SRAM (IC111) that is backed up by battery.

2. Internal Bus inside Monitor

Most blocks of the deflection circuit and the signal circuit are controlled by the I2C bus that is driven by IC103 (5/6), (6/6). The I2C bus is controlled of its operation by controlling the general purpose port of IC106 by software.
IC112 is an expansion I/O unit that is used to control the internal bus and the TALLY LED.

3. Connection to Options

The respective option boards are controlled by IC101 (1/4), (2/4), (3/4), IC103 (1/6), (2/6), (3/6), (4/6) and IC104. The data communication between the monitor and the option slot bus uses the strobe/hand-shake method using the SLOT ID signal. Data is transferred by MISO/MOSI/SCLK. The MISO/MOSI/SCLK signal is also used for communication between the MA board and the MB board.
IC112 is the RS-422 driver that establishes communication to read the key data or knob information of the internal controller or of the control unit and to turn on/off the LEDs.

6-4. MB board

1. Character Display and Internal Signal Generator

IC1107 is the character generator IC such as menu characters. IC1110 generates the 4:3 marker and the various signals for automatic adjustments.
Outputs of the two ICs are mixed by IC1100 and are output.

2. Serial Communication Driver

IC1105 is the communication controller for the serial remote control. It performs the transmission and reception of the serial remote communication data together with the RS-485 driver of IC1103 and IC1106.
IC1108 (communication controller) and IC1109 (RS-232 driver) perform the transmission and reception of the OPTION terminals.

3. Parallel Remote Control

IC1112 reads out the status of the parallel remote terminal and transfers it to the CPU in the MA board.

6-5. D Board P1 and P2

1. D board - P1

The P1 block of the D board is the DC-DC converter circuit that generates the following power voltages to be used in the monitor: Standby 5 V (abbreviated as ST5 hereafter), +/- 12 V, +/- 6 V, +/- 5 V, + 24 V and the floating power source (HC+, HC-, HC N) for the H. CENTER circuit.

The DC-DC converter receives the DC power input (the DC input voltage line is called DC. IN) from various sources such as the DC input that is generated by the external power supply board (G board) or the DC input from lithium-ion battery or the DC input that is directly supplied from any external DC power supplies. The acceptable range of the DC. IN input voltage is from 11 V to 17 V. The DC. IN input voltage is compared with the output of the shunt regulator IC1601 by the comparator Q1601. When the DC voltage of 11 V or less or 17 V or higher is input, the relay RY1601 that is inserted in the input line, is activated to turn off the DC power input in order to protect the subsequent circuit from being damaged. The DC voltage that is supplied from the power supply board is 13 V.ST5V is generated by the PWM controller consisting of IC1602 and FET Q1604 that is a regulator. The output voltage from the regulator is voltage-divided and is compared with the reference voltage that is created by IC1601, by the comparator IC1602. The error output from the comparator controls the ON time of the pulse amplitude (frequency of the pulse is about 66 kHz) that is applied to Q1604 gate. ST5V is always output whenever the DC. IN voltage is input, and does not depends upon the POWER switch operation. The circuit Q1608 to Q1610 is the switch that turns off the PWM IC output when the DC. IN input voltage is outside the operating range of this regulator circuit. Q1611 to Q1613 are the transistors to drive Q1614.

+6 V power is generated by the PWM controller IC2601 and the regulator FET Q2607. -6 V power is generated by the PWM controller IC2601 and the regulator FET Q2612. ± 6 V power depends on the POWER switch. Output of the ± V power is controlled by the control signal that is supplied from microprocessor. When the POWER switch is turned off, output from IC2601 is turned off by Q1617, Q2601 to Q2603 so that ± 6 V power output is turned off.

± 5 V power is generated by the 3-terminal regulator IC2602 and IC2603 from the ± 6 V input power.

± 12 V power is generated by the PWM controller IC3601 and regulator FET Q3607, Q3609 and Q3613.

This output is also controlled by the output signal from microprocessor in the same manner as in the case of ± 6 V power.

The floating power voltages (HC+, HC− and HC N) are generated by rectifying and smoothing out the output voltage form the secondary winding of the transformer T3601 that receives the DC. IN voltage to its primary winding after the DC. IN voltage is switched by the +12 V regulator FET.

24 V power is generated by rectifying and smoothing out the voltage that is induced across pin-5 and pin-6 of T3601 that receives the input power at its primary winding pin-7.

2. D board - P2

The P2 block of the D board consists of the horizontal and vertical sync signal processing, sync signal delay processing, deflection system control, BLKG signal processing, +B power supply circuit for horizontal output, horizontal and vertical output circuits and the H. CENTER circuit.

- Sync Signal Processing, Sync Signal Delay Processing and Deflection System Control Circuits

  The horizontal and vertical sync signals that are input from CN2501 (pins-1/-2) are sent to the H/V DELAY timing circuit consisting of IC2513, IC2512, IC2509 and IC2519. The H/V DELAY timing circuit outputs the signal that repeats H/L at every half-cycle of the H. and V. input signals. This output signal is shaped of its pulse-width by IC2505 and is sent to IC2503 that is the deflection system signal processing IC. During normal operation of the monitor, the H/V DELAY timing circuit outputs the sync signals that have the same phase as those of the input signal. However, during the H. DELAY mode and the V. DELAY mode, the signal that is inverted of its phase by IC2517 and IC2516 is input to IC2505, the output sync signals are generated from the edges that correspond to the half-cycle of both horizontal and vertical periods. Thus the H. DELAY and the V. DELAY are realized.

  The deflection signal processor IC2503 (TDA9106) outputs the various signals that are required for deflection, such as horizontal drive signal, parabola signal for dynamic focusing, parabola signal for picture distortion correction, vertical drive signal and H/V blanking signals. These output signals are controlled directly by the microprocessor in the MA board through I2C bus. The horizontal free-running frequency is set for about 18 kHz. The pull-in range of the input signal frequency is from 15 kHz to 45 kHz.

The deflection signal processor IC2503 has the built-in protector for X-ray irradiation. When its pin-15 is raised to 8 V or higher, the X-ray protection circuit starts working to stop the horizontal and vertical outputs. The X-ray protector circuit can be reset by turning off the main power once then back on.
There can be a case that the monitor receives the non-standard TV signal such as the output signal from VTR. In order to reduce the skew effect on screen caused by irregular timing of the input sync signal, the PLL circuit inside the IC2503 is stopped using the PLL stop signal that is output from IC2523 during the vertical blanking period. This function is effective when the horizontal frequency of the input signal is 15 kHz (480/60i, 575/50i ,etc.) Because this circuit produces an ill effect when the standard TV signal is input, use or not-use of this circuit can be selected from the on-screen menu.

- BLK Signal Processing
  The H. blanking circuit consists of IC2513, IC2521, IC2506 and the peripheral circuit. The timing reference signal for the horizontal blanking is the H. DF signal (parabola waveform of horizontal cycle) that is output from IC2503 pin-17. The start position of the horizontal blanking period is determined by creating a pulse by comparing the parabola waveform with a certain DC level at IC2506, and by comparing the output pulse with the waveform that is output form IC2503 pin-22 (H. BLKG). IC2513 determines the end position of the horizontal blanking.
  The V. blanking circuit consists of IC2509, IC2522 and the peripheral circuit. The start position of the V. blanking is determined by the fall-down edge of the VD-signal that is output from IC2503 pin-29. The end position of the V. blanking is determined by IC2509.
  The H/V blanking signal are controlled of its timing by the control voltage that is output from IC2501 (D/A converter).

- +B Power Supply Circuit for Horizontal Output
  The +B power supply circuit for horizontal output consists of Q2509, L2503, D2505, C2542 and other devices.
  This circuit uses the step-up chopper circuit in order to produce the + B power in which the DC. IN input voltage is stepped up by switching. When Q2509 is turned on, a current flows from drain to source of Q2509 through L2503. When Q2509 is turned off, a counter electromotive force is generated across L2503 that charges C2542 through D2505 and generates the +B voltage. Relationship between DC. IN and +B voltage is shown below.

  V (+B) = DC. IN + V (L2503)

  It means that the output voltage can be changed in accordance with the amount of energy that is stored in L2503. In the other words, the output voltage can be controlled by controlling the ON time of Q2509.
  The +B power for the horizontal deflection system is controlled by the PWM IC IC502.
  The H. size control DC voltage is super-imposed upon the horizontal PIN distortion correction signal that is output from IC2503 pin-31. The super-imposed signal is compared with the signal that is fed back from the horizontal output circuit. The error signal of the comparator is the PWM control signal (H. PWM) that is output from IC502 pin-11. The PWM control output signal is amplified by Q2507 and Q2508, then is sent to Q2509 gate so that it drives Q2509.

- Horizontal Output Circuit
  The drive signal (HD) for the horizontal output signal is output form IC2503 pin-21, amplified by Q2512, Q2513, Q2535 and drives T2503 (HDT). The HD signal that is current-amplified by HDT, drives Q2514 and generates the collector pulse by the resonance of the horizontal winding of DY, the S-shape capacitor C2562, C2563 and C2564. The collector pulse generates the AGC pulse having 5 Vp-p with C2556, C2557, C2558, IC2508 and the peripheral circuit. The AGC pulse is sent to the deflection system control IC (IC2503), signal system B board, microprocessor control system MA board.
  The horizontal deflection current that flows through the DY is detected of its peak value as the voltage data by T2502 and is sent to IC502 that is the horizontal deflection control PWM IC on the P board. For the linearity compensation of the screen, the right half of a screen is compensated by the S-shape capacitors (C2562 to C2564) and the left half of a screen is compensated by HLC (L2505, L2509). When the video signal having the horizontal frequency of 45 kHz (33.75 kHz < Fh ≤ 45 kHz), compensation is applied by L2509 and C2562. When the horizontal frequency of 30 kHz (15.75 kHz < Fh ≤ 33.75 kHz), compensation is applied by L2509, C2562 and C2563. When the horizontal frequency of 15 kHz (15.625 kHz ≤ Fh ≤ 15.75 kHz), the relay RY2501 is turned off by Q2521 and compensation is applied by L2505, L2509, T2504 and C2562 to C2564. T2504 is a

choke coil that is inserted to raise the +B voltage during 15 kHz input mode. Q2519 is the switch to add the S-shape capacitor for 15 k and 30 k to the circuit, and is driven by Q2522 and Q2523. The control signal for switching these horizontal frequencies is supplied from IC2502 (D/A converter).

- Vertical Output Circuit
  The vertical output circuit consists of IC2504 and its peripheral circuit.
  The vertical output signal is generated by inputting the V. drive signal that is output form IC2503 pin-29, to IC2504 pin-1 where it is amplified. The V. center position is controlled by inputting the V. DC signal that is supplied from IC2503 pin-28, to IC2504 pin-7. The vertical deflection amplitude and the vertical center position are controlled by IC2503.
  The vertical feedback pulse is generated by wave-shaping the V. flyback pulse with R3505, R3506 and D2524, and by inputting it to IC IC2503 pin-30.

- H CENTER Circuit
  The H CENTER control is performed by converting the DC voltage level of IC2502 (D/A converter) pin-7 to electric current by IC2518, Q2516, amplified by IC2507, and by super-imposing an appropriate DC current upon the horizontal deflection current through L2504 (HCC).
  The power supply for IC2507 uses the floating power supplies that are HC+, HC- and HC N as described before.

- Protector Circuit
  The D board (P2) has the three protectors that are H. PROT, V. PROT and H+B OVP. The H. PROT is the protector that is activated when the horizontal deflection is stopped. It detects existence of the collector pulse with IC2514, IC2515, D2519 and C576 after the collector pulse is divided by C2556 and C2557.
  V. PROT is the protector that is activated when the vertical deflection is stopped. It detects existence of the V. out waveform after the V. out waveform is rectified and smoothed out by D2523 and C2578.
  H+B OVP is the protector that is activated when the + B power voltage has increased by some defects. It detects the + B voltage after it is divided by R2552 and R2553. Operating point of the protector is about 65 V.

6-6. P Board

The P board consists of the PWM circuit for horizontal deflection system and for high voltage system, the + B power supply for high voltage output, protector circuit, degauss circuit and heater circuit.

1. PWM Circuit for Horizontal Deflection and High Voltage Systems

The PWM circuit for horizontal deflection system has already been described. The PWM circuit for high voltage system controls length of the ON period of the high voltage PWM output that is output from IC504 pin-13. The ON period is controlled by the error output that is obtained by comparing the reference voltage that is generated by the shunt regulator IC504 with the high voltage detected output that is output from FBT pin-12 which is the voltage obtained by dividing the high voltage (HV) with resistors.
For your reference, the input signal that is used as the reference of horizontal defection and the high voltage systems is the HD signal that is output from IC2503 pin-21. The HD signal is locked to the input signal of the monitor. (When there is no input signal to the monitor, it synchronized with the free-run frequency.)
There can be a case that the horizontal output circuit and the high voltage output circuit are damaged because they cannot follow the sharp change of input frequency when frequency of the input signal is changed or when input channel is switched. In order to prevent the horizontal output circuit and the high voltage output circuit from damage, IC502 reduces the ON period of the horizontal and high voltage PWM output to their minimum (by decreasing the + B voltage so that the horizontal deflection size is reduced to minimum and high voltage is decreased to the lowest voltage) when IC502 receives the frequency change information from IC2503 pin-37 (DTC: Dead Time Control) in the D board. The ON period is controlled until these circuits are locked o the input frequency slowly with some time constant in order to prevent these circuits from damage.
IC502 also has the built-in HD drive output circuit that receives the HD input signal and is locked to the input HD frequency. Phase and ON time of the HD output signal is determined by the voltages that are applied to pin-22 and pin-21 respectively. In this monitor, this HD drive signal is also used as the drive signal of te high voltage output circuit.

2. + B Power Supply for High Voltage Output

The + B power supply for high voltage output consists of Q515, L501, D520, C535, C583 and other devices.
This circuit uses the step-up chopper circuit in order to produce the + B power in which the DC. IN input voltage is stepped up by switching the transistor Q515. When Q515 is turned on, a current flows from drain to source of Q515 through L501. When Q515 is turned off, a counter electromotive force is generated across L501 that charges C535 and C583 through D520 and generates the +B voltage. Relationship between DC. IN and +B voltage is shown below.

V (+B) = DC. IN + V (L501)

It means that the output voltage can be changed in accordance with the amount of energy that is stored in L501. In the other words, the output voltage can be controlled by controlling the ON time of Q515.
The +B power for the horizontal deflection system is controlled by the PWM IC IC502.
The PWM control signal (HV +B PWM) is output from IC502 pin-13. The PWM control output signal is amplified by Q506, Q509 and Q510, then is sent to Q515 gate.

3. High Voltage Output Circuit

The input drive signal to the high voltage output circuit is output from IC502 pin-23 and is sent to an input of the NAND gate IC505. The other input terminal of the NAND gate is the protector detection terminal (staying at the "L" level when the protector works) that cuts off the drive signal to the high voltage circuit when the protector works.
The drive signal that is output from IC505 is sent to the HV OUT: Q520 gate through the inverter (Q511) and the drive circuit (Q513, Q514).
The flyback pulse is generated at the Q520 drain by the resonance of T502 (FBT), T501, C539, C542 when Q520 is switched and is turned off by the HV. DRV pulse.
As the CRT current increases and the high tension voltage decreases, the voltage at the high tension voltage detection pin pin-12 of FBT decreases so that Q515's ON time is prolonged by IC502. As the result of the longer ON time, +B voltage increases, the Q520 drain pulse becomes larger and the high tension voltage increases. The high tension voltage is thus regulated.
Q527 is the switch that selects the resonance capacitors. The switch Q527 is turned on and capacitance of the resonance capacitor is increased when 15 kHz signal is input by shorting C542. This shorting is performed in order to stabilize the high voltage circuit by widening the pulse width of the drain pulse.
T502 is the flyback transformer that generates the high tension voltage of the monitor, focus voltage, G2 voltage, heater voltage and high voltage protector detected output voltage. The circuit consisting of L504, C544 and R581 is the filter circuit in order to absorb the FBT damping. For your reference, the filter side of C545 that is T501 pin-2 receives the voltage that is equivalent to the + B voltage.
The 120 V power voltage that is used for VIDEO OUT is generated by retracing and rectifying the voltage generated across the secondary winding of T501.

4. Protector Circuits

The P board has the following protector circuits that hold down the horizontal deflection circuit and the high voltage output circuit when any of the protector circuit is activated.

- HV Protector
  The HV protector is the circuit that holds down the high voltage when the high voltage (HV) that is applied to CRT exceeds the set value due to any abnormality or trouble.
  The output signal from pin-5 of FTB that is the tertiary winding of FBT, is retrace-rectified by D527 and C554 to generated the detected output voltage of the high voltage protector. The high voltage output thus detected, is adjusted of its signal level, buffered by IC511 and is sent to the negative (-) input terminal of the comparator IC509 pin-3. The positive (+) input terminal of the comparator is connected to the reference voltage of the high voltage protector that is generated by the shunt regulator IC507. When the detected high voltage goes higher than the reference voltage, the comparator works so that the protector output terminal is latched to the "L" level by Q507 and Q508. The operating point of the HV protector is HV = 18.2 kV.

- Ik Protector
  The Ik protector is the circuit that holds down the high voltage when the current Ik that flows through the CRT exceeds the set value due to any abnormality or trouble.
  The current flowing through the ABL signal line is detected in the form of voltage by the resistors R1504 to R1506. The detected current Ik is sent to the positive (+) input terminal of the comparator IC509 pin-5. The negative (−) input terminal of the comparator is connected to the reference voltage of the Ik protector that is generated by the voltage-division with R583 and R584. When the detected Ik voltage goes lower than the reference voltage, the comparator works so that the protector output terminal is latched to the "L" level by the circuit of Q521 to Q523. C538 is inserted in order to

pull up the Ik detection terminal to 12 V in order to prevent the protector circuit from erroneous operation. The operating point of the Ik protector is ABL current = 630 μA.

- HV +B OCP Protector
  The HV +B OCP protector is the circuit that holds down the high voltage when the current flowing through the DC. IN line exceeds the set value due to any abnormality or trouble.
  The DC IN line voltage is voltage-divided by the resistors R1522 to R1524 that is sent to Q512 emitter. The Q512 base receives the following voltage.
  Vb (Q512) = DC. IN − R568 × 1 (DC. IN) − Vf (D536)
  When the relation of Ve_Vb ≥= Vbe (Q512) is established, Q512 turns on so that the protector output terminal is latched to the "L" level by the circuit of Q516 and Q519. D536 is inserted in order to cancel the temperature characteristics of the Vbe voltage. The operating point of the HV +B OCP protector is I current (DC. IN) = about 2.4 [A].

- HV +B OVP Protector
  The HV +B OVP protector is the circuit that holds down the high voltage when the HV +B line voltage exceeds the set value or when HV voltage abnormally decreases due to any abnormality or trouble.
  The HV +B line voltage is voltage-divided by the resistors R1514 and R1513 to activate the protector. The operating point of the HV +B OVP protector is about 120 [V]. On the other hand, the detected output of the high voltage of the FBT is compared with the voltage level that is voltage-divided by R1532 and R1533 so that the abnormally low voltage from the FBT high voltage output can be detected in such a case of FBT layer short, and the protector is activated in such an error. However, this protector has a longer time constant that prevents the protector circuit from erroneous operation. The operating point of this protector is HV voltage ≤ 6 [kV].

- Degauss Circuit
  The degauss circuit consists of the PWM controller IC503, the high withstand voltage FET driver IC506, the drive FET Q517 and the peripheral circuit.
  When the main power is turned on or when the manual degauss is turned on, the control signal "DEGAUSS ON" that is sent to CN501 pin-8 is detected at its rise-up edge that sets "L" to IC503 DTC and to start oscillating the PWM output. (Length of the oscillating period is determined by the time constant of R518, R519 and C518.) The signal that is output from IC503 pins-9 and -10 is sent to IC506 pins-10 and -12 to generate the signal that drives the FET in the subsequent circuit. The FET gate receives the signal that repeats High and Low only during the period when the PWM output is oscillating so that the FET is turned on and off repeatedly. When the FET is turned on, a current flows from the 120 V line to the degauss line so that the CRT is degaussed.

- Heater circuit
  The heater circuit consists of the DC-DC converter IC510 and the peripheral circuit. The voltage that is obtained by rectifying the pin-8 "H1" using the FBT pin-7 output "H2" as the reference, is used as the power supply of IC510. The voltage that is obtained by rectifying the IC output with D530 and L505, is voltage-divided by resistors. The voltage that is obtained by the resistor-division is returned to IC510 as the feedback. The heater circuit uses the step-down converter circuit as its circuit configuration. The heater voltage that is applied to CRT is 4.5 Vrms.

6-7. HA, HB and HC boards

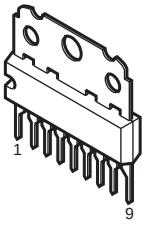
Key scan and turning on and off the LEDs
The SUB CPU (IC on the HC board) sends out the LED on signal and the key scan output signal using the serial signal (MISO, MOSI, SCLK). It receives the key scan input signal.

6-8. HD board

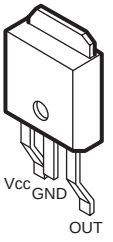
An input signal is selected from the various input signals that are connected to the AUDIO INPUT connectors (1, 2 and 3). It amplifies the selected audio signal and outputs the audio signal to speakers.

Section 7
Semiconductors

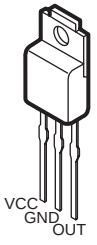
AN5265



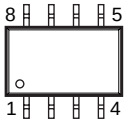
BA05FP-E2



BA05T
BA09T

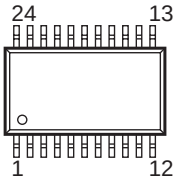


CXA1211M
CXA1521M
LM358M
LM393M
LM393PS
LTC490CS8
M24C02-MN6T
MAX487CSA-TE2
MAX490ECSA
MM1026BFB
NJM2360AM (TE2)
TC4W53FU
TC7W08F
TC7W32FU
TC7W74FU
TL082M
UPC4558G2
X25040SI



TOP VIEW

CXA1544M-T6
NJU3716M-T2



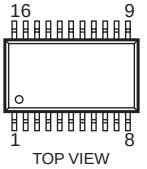
TOP VIEW

CXA1739S



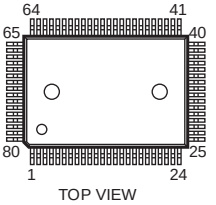
TOP VIEW

CXA1875AM-T4
MAX202CSE
MAX3100CEE-TG068
MC74HC4053F
MC74HC4538AF
TC74HC4053AFT (EL)
TC74HC4538AF
TL1451ACPWR
TL494CNS



TOP VIEW

HD6435368AX06M



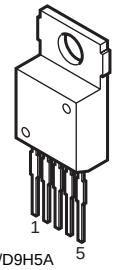
TOP VIEW

IR2112
SN74HC05ANS

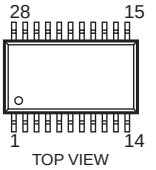


TOP VIEW

LA6500-FA
MC14052BF

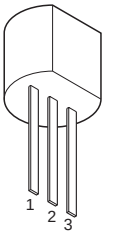


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MB90096PF-178
MB90096PF-G-127-BND-ER

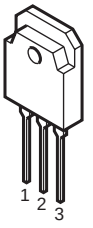


TOP VIEW

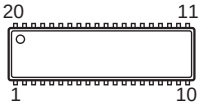
LM2990SX-5.0



LM2990T-5.0

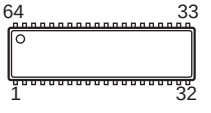


M62399FP-TE2



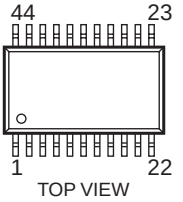
TOP VIEW

MB89613R-651



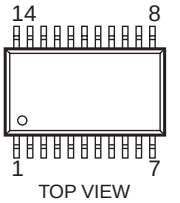
TOP VIEW

MBM29F400BC-90PF



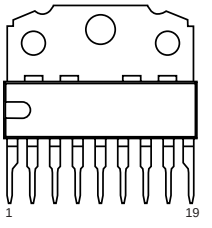
TOP VIEW

MC74HC00AFEL
MC74HC08AF
MC74HC589AFEL
TC74HC30AF
TC74VHC02F
TC74VHC04F
TC74VHC125F
TC74VHC138F
TC74VHC14F



TOP VIEW

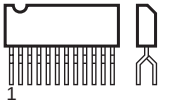
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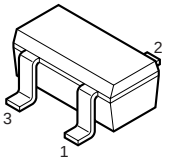
MARKING SIDE VIEW

MZ1530

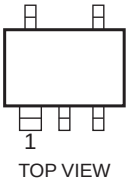
MARKING SIDE VIEW



PST529CMT

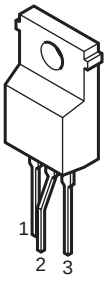


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TC4S11F
TC4S71F
TC7S08F
TC7S14F

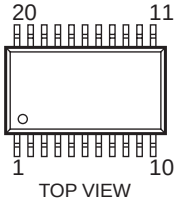


TOP VIEW

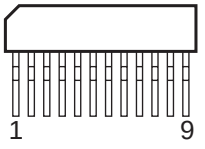
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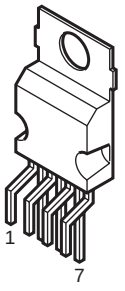
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TC74VHC574F



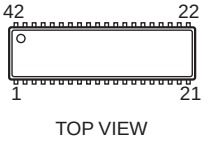
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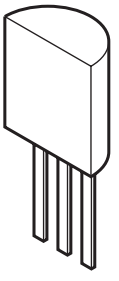
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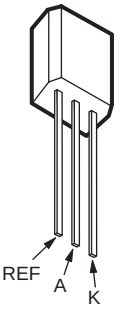
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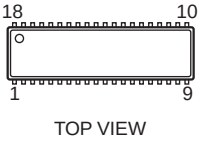
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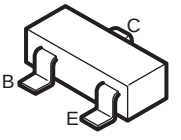
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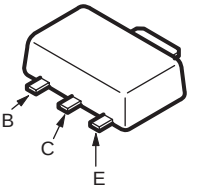
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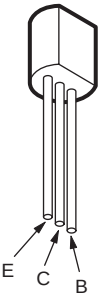
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2SA1037AK-T146-R
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2SA1338-5-TB
2SA1462-T1Y33
2SA1462-Y33
2SC1623-L5L6
2SC3326N-A
2SC3360-N16
2SC3392-5-TB
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DTC114EK
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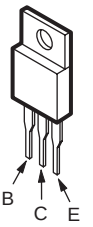
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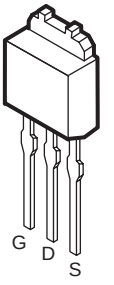
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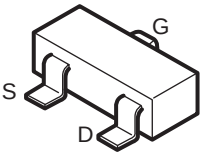
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2SD2578-CA
IRFI640



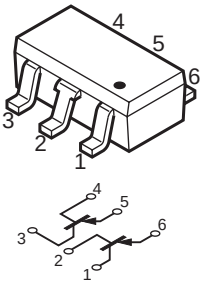
2SJ377 (TE16L)
2SK2231-TP



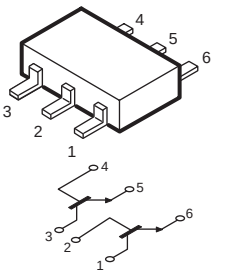
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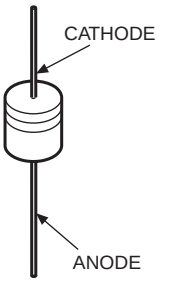
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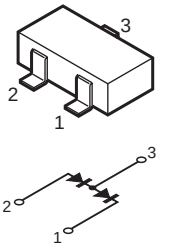
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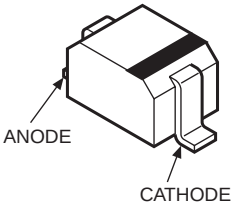
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RD27ESB2
RD5.1SB3-T2
RD6.8SB2-T1
RD7.5ESB1



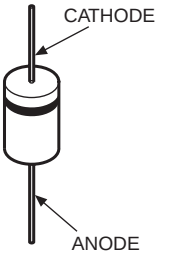
1SS226



1SS352
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RD18SB2-T1
RD27SB-T1
RD3.3SB
RD6.2SB
RD6.2SB2-T1

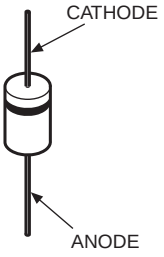


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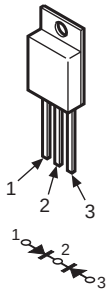


http://getMANUAL.com

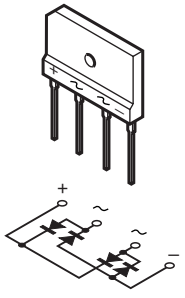
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ERA91-02



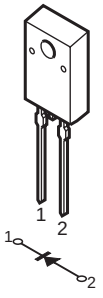
D30SC4M



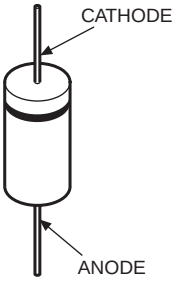
D4SB60L



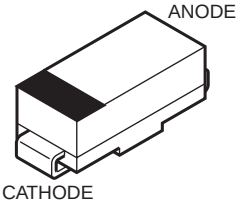
D5L60



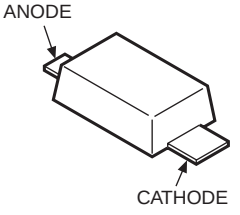
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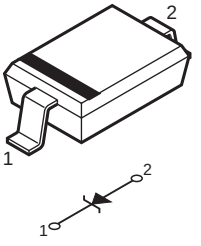
EC10QS-06
SC311-6-TE12RA
SC802-04
SC802-06



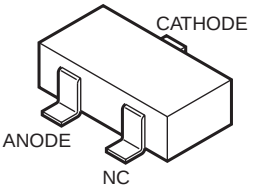
MA111-(K8).S0



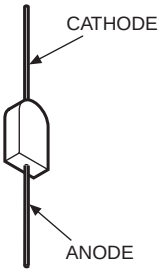
RD10SB1
RD4.7SB1-T1
RD6.2SB (D9H5)



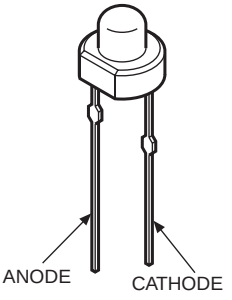
RD18M-T1B2
RD22M-B



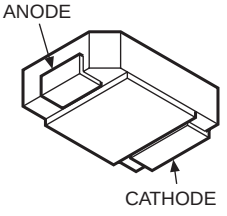
RM11C



SLR-325MCT31
SLR-325VCT31



SML-020MLTT87



Section 8
Exploded Views

NOTE :

The components identified marked ⚠ are critical for safety.
Replace only with the part number specified.

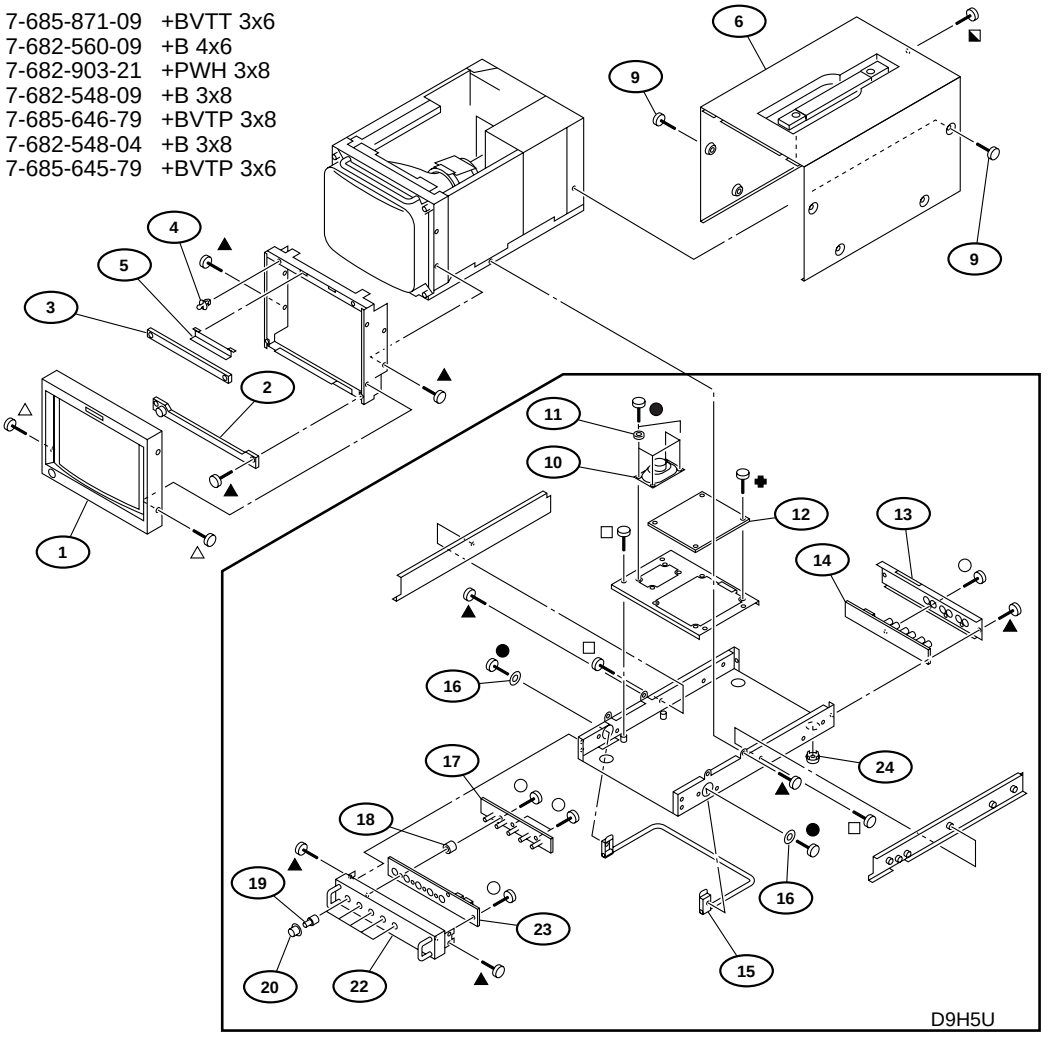
Les composants identifiés par la marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.

Note: In case the handle is defective, only handle can not be replaced. Replace the cabinet assy.

8-1. CHASSIS

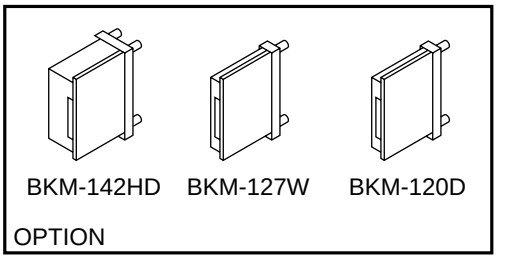
▲: 7-685-871-09 +BVTT 3x6
△: 7-682-560-09 +B 4x6
●: 7-682-903-21 +PWH 3x8
□: 7-682-548-09 +B 3x8
○: 7-685-646-79 +BVTP 3x8
◪: 7-682-548-04 +B 3x8
✤: 7-685-645-79 +BVTP 3x6

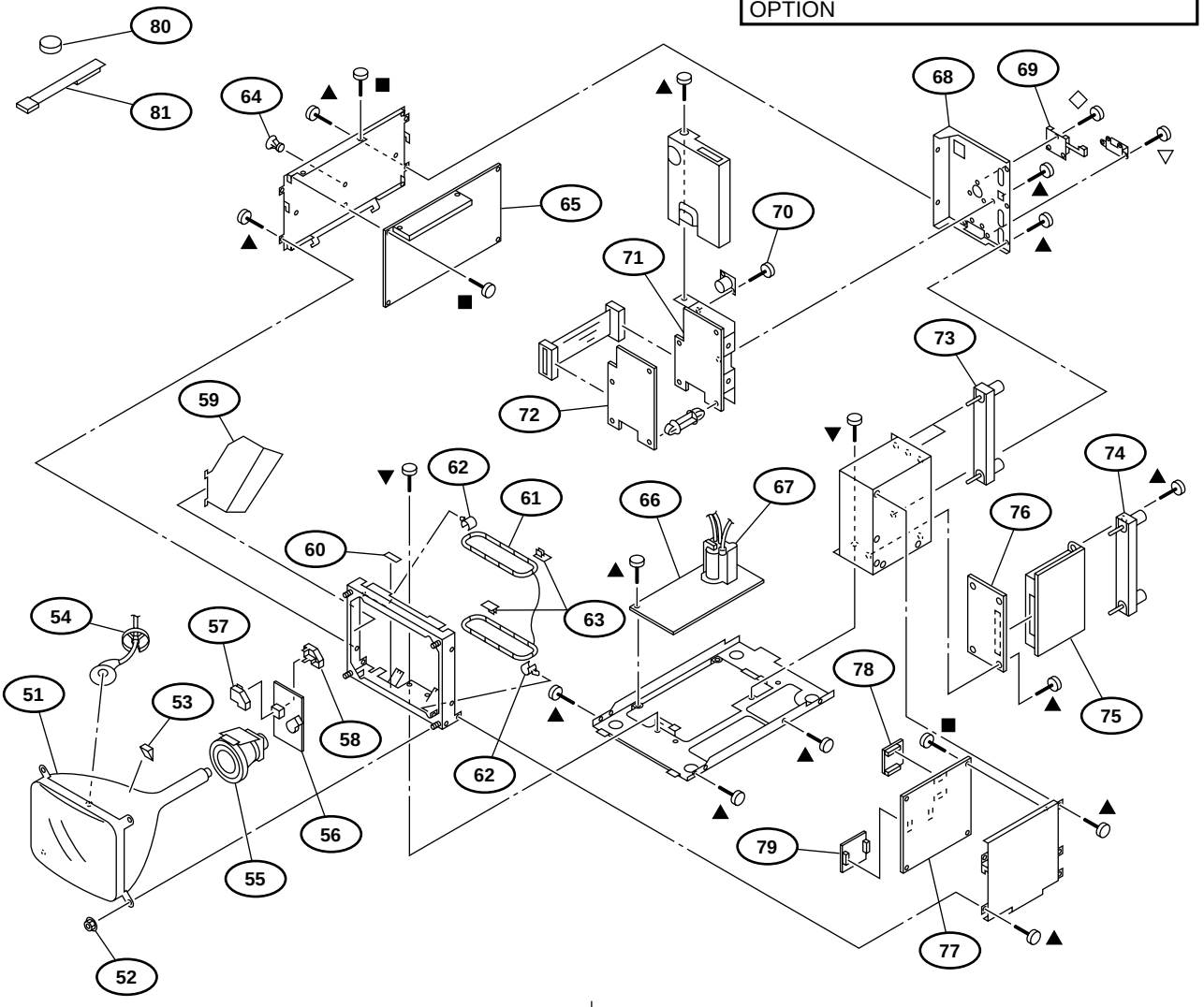


Ref.No.	Part No.	Description	Remark
1	X-4037-176-1	BEZEL (16:9) ASSY	
2	* A-1373-750-A	YB MOUNT	
3	* A-1373-751-A	YA MOUNT	
4	* 4-303-473-00	SUPPORT, PC	
5	* 4-073-708-01	PLATE, LIGHT INTERCEPTION	
6	X-4037-295-2	CABINET ASSY (D9H1A, D9H1E)	
	X-4037-295-1	CABINET ASSY (D9H1U)	
	X-4037-296-1	CABINET ASSY (D9H5U)	
	X-4037-296-2	CABINET ASSY (D9H5A, D9H5E)	
9	4-063-969-21	SCREW (OS), CASE, CLAW	
10	1-544-063-12	SPEAKER (D9H5)	
11	* 4-038-987-01	CUSHION, SPEAKER (D9H5)	
12	* A-1375-186-A	HC COMPL (D9H5)	
13	* 4-072-761-01	COVER, REAR (D9H5)	
14	* A-1372-677-A	HD MOUNT (D9H5)	
15	* X-4036-829-1	STAND ASSY (D9H5)	
16	3-701-444-21	WASHER, 6 (D9H5)	
17	* A-1372-676-A	HB MOUNT (D9H5)	
18	* 4-072-755-01	SPACER (D9H5)	
19	4-072-754-01	SHAFT (D9H5)	
20	4-072-756-01	BUTTON, VOLUME (D9H5)	
22	X-4037-180-1	PANEL ASSY, CONTROL (D9H5)	
23	* A-1372-675-A	HA MOUNT (D9H5)	
24	* X-4037-179-1	FOOT ASSY (D9H5)	

8-2. PICTURE TUBE

▼: 7-682-946-09 +PSW 3x5
■: 7-682-948-09 +PSW 3x8
▲: 7-685-871-09 +BVTT 3x6
◇: 7-682-547-09 +B 3x6
▽: 7-627-556-58 +P 2.6x5



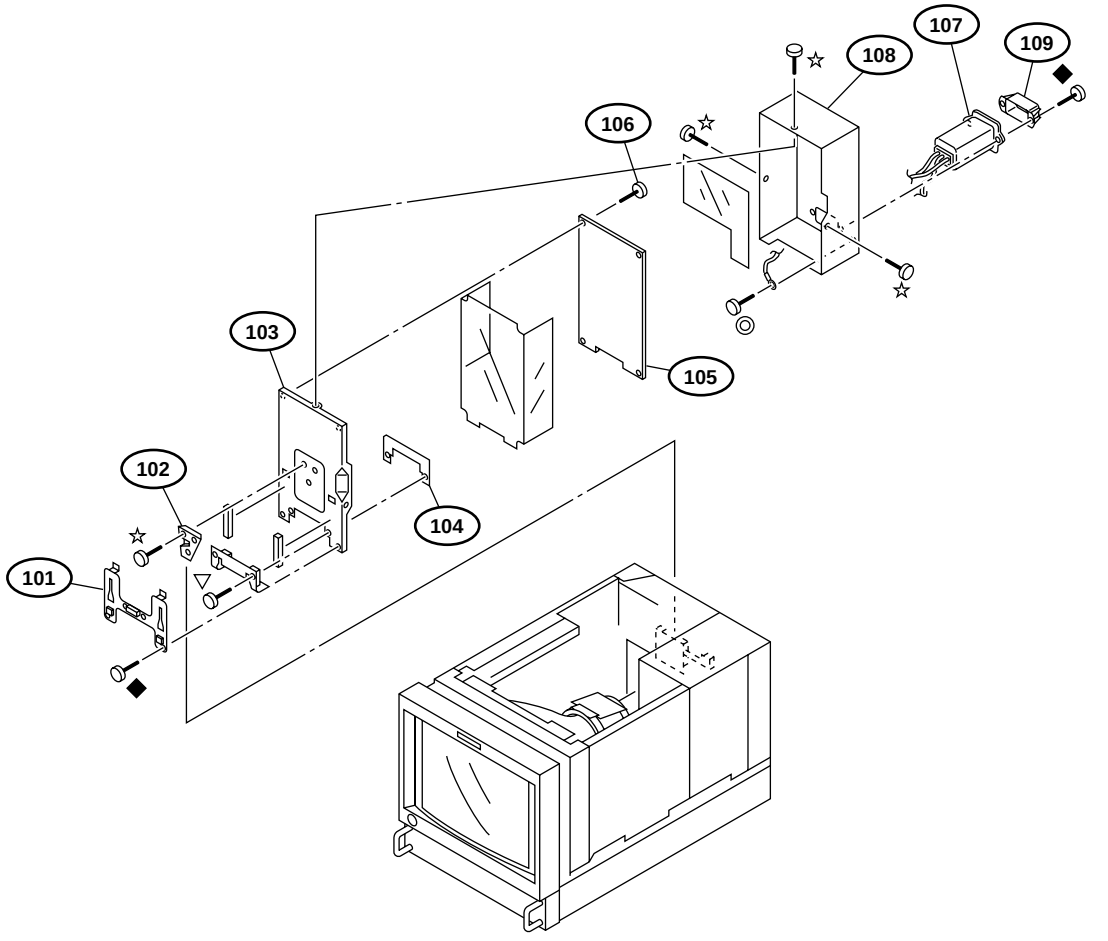


Ref.No.		Part No.	Description	Remark
51	⚠	8-737-658-05	PICTURE TUBE 09FX (DTV SPEC)	
52		4-304-511-00	NUT (M5), FLANGE	
53		4-309-369-00	SPACER, DEFLECTION YOKE	
54	*	4-034-856-01	HOLDER, HV CABLE	
55	⚠	1-451-507-11	DEFLECTION YOKE	
56	*	A-1331-957-A	C MOUNT	
57	*	4-376-133-11	COVER (MAIN), CV VOL	
58	*	4-376-132-11	COVER (REAR LID), CV VOL	
59	*	4-073-712-01	INSULATOR (ANODE)	
60		3-840-486-02	CUSHION, SPEAKER	
61	⚠	1-419-306-11	COIL, DEGAUSSING	
62	*	4-072-725-01	HOLDER, DEGAUSE COIL	
63		4-380-534-01	CAP, DGC	
64		4-052-842-01	HOLDER, PWB	
65	*	A-1335-118-A	D COMPL	
66	*	A-1195-156-A	P COMPL	67
67	⚠	1-439-526-21	TRANSFORMER ASSY, FLYBACK	

Ref.No.		Part No.	Description	Remark
68	*	X-4037-178-1	PANEL ASSY, REAR (D9H1)	
	*	X-4037-178-2	PANEL ASSY, REAR (D9H5)	
69		A-8278-025-C	MOUNT V ASSY	
70		4-035-802-01	SCREW (M2.6X6)	
71	*	A-1306-575-A	MB COMPL (D9H1)	
	*	A-1306-576-A	MB COMPL (D9H5)	
72	*	A-1306-574-A	MA COMPL (D9H1)	
	*	A-1306-581-A	MA COMPL (D9H5)	
73	*	X-4037-166-1	PANEL ASSY, BLANK	
74	*	X-4037-154-1	PANEL ASSY, CONNECTOR	
75	*	A-1136-013-A	BX COMPL	
76	*	A-1390-942-A	T MOUNT	
77	*	A-1136-024-A	B COMPL	78, 79
78	*	A-1131-464-A	B2 MOUNT	
79	*	A-1131-463-A	B1 MOUNT	
80	*	1-452-884-11	MAGNET	
81		4-051-735-22	PIECE A(75), CONV. CORRECT	

8-3. POWER UNIT

◆: 7-682-549-09 +B 3x10
☆: 7-682-247-09 +K 3x6
◎: 7-682-961-01 +PSW 4x8
▽: 7-627-556-58 +P 2.6x5



Ref.No.		Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
101		4-072-743-01	BRACKET, POWER					
102	*	4-628-904-02	SHOE, V					
103	*	X-4037-169-1	CASE (BOTTOM) ASSY, POWER					
104		4-072-700-01	NUT, PLATE					
105	*	A-1316-460-A	G COMPL					
106		4-382-854-01	SCREW (M3X8), P, SW (+)					
107	⚠	1-251-382-11	INLET, AC 3P(WITH NOISE FILTER)					
108	*	X-4037-170-1	CASE (TOP) ASSY, POWER					
109		2-990-241-02	HOLDER (A), PLUG					



B

Section 9
Electrical Parts List

NOTE :

The components identified marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

RESISTORS
- All resistors are in ohms.
- F: nonflammable
- METAL: Metal-film resistor
- METAL OXIDE: Metal oxide-film resistor

Ref.No.	Part No.	Description		Remark
	* A-1136-024-A	B COMPL *********		
	7-682-947-01	SCREW +PSW 3X6		
	<CAPACITOR>			
C300	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C301	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C304	1-104-760-11	CERAMIC CHIP 0.047µF	10%	50V
C305	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V
C306	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C307	1-164-505-11	CERAMIC CHIP 2.2µF		16V
C308	1-115-152-11	ELECT CHIP 22µF	20%	6.3V
C309	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C310	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C311	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C312	1-126-390-11	ELECT CHIP 22µF	20%	6.3V
C332	1-104-760-11	CERAMIC CHIP 0.047µF	10%	50V
C333	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V
C334	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C335	1-164-505-11	CERAMIC CHIP 2.2µF		16V
C336	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C337	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C338	1-115-152-11	ELECT CHIP 22µF	20%	6.3V
C339	1-164-505-11	CERAMIC CHIP 2.2µF		16V
C340	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C341	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C367	1-104-760-11	CERAMIC CHIP 0.047µF	10%	50V
C368	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V
C369	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C370	1-164-505-11	CERAMIC CHIP 2.2µF		16V
C371	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C372	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C373	1-115-152-11	ELECT CHIP 22µF	20%	6.3V
C374	1-164-505-11	CERAMIC CHIP 2.2µF		16V
C375	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C376	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C377	1-126-396-11	ELECT CHIP 47µF	20%	16V
C378	1-126-396-11	ELECT CHIP 47µF	20%	16V
C386	1-126-916-11	ELECT 1000µF	20%	6.3V
C387	1-126-916-11	ELECT 1000µF	20%	6.3V
C450	1-126-394-11	ELECT CHIP 10µF	20%	16V
C451	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C452	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C454	1-126-396-11	ELECT CHIP 47µF	20%	16V
C460	1-126-390-11	ELECT CHIP 22µF	20%	6.3V
C461	1-126-390-11	ELECT CHIP 22µF	20%	6.3V
C462	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C463	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C464	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C465	1-126-394-11	ELECT CHIP 10µF	20%	16V
C466	1-126-394-11	ELECT CHIP 10µF	20%	16V
C467	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C468	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C485	1-126-390-11	ELECT CHIP 22µF	20%	6.3V
C486	1-126-390-11	ELECT CHIP 22µF	20%	6.3V
C487	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C488	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C489	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C490	1-126-394-11	ELECT CHIP 10µF	20%	16V
C491	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C492	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C494	1-126-396-11	ELECT CHIP 47µF	20%	16V
C1300	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1301	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1302	1-163-227-91	CERAMIC CHIP 10PF	0.5PF	50V
C1304	1-104-760-11	CERAMIC CHIP 0.047µF	10%	50V
C1305	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V
C1306	1-109-982-11	CERAMIC CHIP 1µF	10%	10V
C1307	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1308	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1309	1-164-505-11	CERAMIC CHIP 2.2µF		16V
C1320	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1321	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1322	1-163-227-91	CERAMIC CHIP 10PF	0.5PF	50V
C1324	1-104-760-11	CERAMIC CHIP 0.047µF	10%	50V
C1325	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V
C1326	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1327	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1330	1-164-346-91	CERAMIC CHIP 1µF		16V
C1340	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1341	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1342	1-163-227-91	CERAMIC CHIP 10PF	0.5PF	50V
C1344	1-104-760-11	CERAMIC CHIP 0.047µF	10%	50V
C1345	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V
C1346	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1347	1-163-031-11	CERAMIC CHIP 0.01µF		50V
C1348	1-163-251-11	CERAMIC CHIP 100PF	5%	50V

B

Ref.No.	Part No.	Description	Remark
C1400	1-163-035-00	CERAMIC CHIP 0.047µF	50V
C1401	1-163-035-00	CERAMIC CHIP 0.047µF	50V
C1402	1-163-035-00	CERAMIC CHIP 0.047µF	50V
C1404	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C1405	1-163-035-00	CERAMIC CHIP 0.047µF	50V
C1406	1-163-809-11	CERAMIC CHIP 0.047µF 10%	25V
C1407	1-163-809-11	CERAMIC CHIP 0.047µF 10%	25V
C1408	1-163-809-11	CERAMIC CHIP 0.047µF 10%	25V
C1409	1-164-489-11	CERAMIC CHIP 0.22µF 10%	16V
C1410	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1411	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1412	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1413	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1414	1-163-275-11	CERAMIC CHIP 0.001µF 5%	50V
C1415	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C1416	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1417	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1418	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1419	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1420	1-163-275-11	CERAMIC CHIP 0.001µF 5%	50V
C1421	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C1422	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1423	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1424	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1425	1-163-275-11	CERAMIC CHIP 0.001µF 5%	50V
C1426	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C1427	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C1428	1-164-004-91	CERAMIC CHIP 0.1µF 10%	25V
C1429	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C1430	1-126-390-11	ELECT CHIP 22µF 20%	6.3V
C1431	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C1450	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C1451	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1460	1-164-005-11	CERAMIC CHIP 0.47µF	25V
C1461	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C1462	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C1464	1-164-005-11	CERAMIC CHIP 0.47µF	25V
C1465	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C1466	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C1467	1-126-935-11	ELECT 470µF 20%	16V
C1468	1-126-396-11	ELECT CHIP 47µF 20%	16V
C1469	1-126-396-11	ELECT CHIP 47µF 20%	16V
C2310	1-126-396-11	ELECT CHIP 47µF 20%	16V
C2311	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2345	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2346	1-163-220-11	CERAMIC CHIP 3PF 0.25PF	50V
C2347	1-107-364-11	MYLAR 0.01µF 10%	200V
C2348	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C2350	1-107-746-11	ELECT 10µF 20%	200V
C2351	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2352	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2353	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2355	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2356	1-163-087-00	CERAMIC CHIP 4PF 0.25PF	50V
C2357	1-107-364-11	MYLAR 0.01µF 10%	200V
C2358	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C2360	1-107-746-11	ELECT 10µF 20%	200V
C2361	1-126-396-11	ELECT CHIP 47µF 20%	16V
C2362	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2363	1-126-396-11	ELECT CHIP 47µF 20%	16V
C2364	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2365	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2366	1-163-087-00	CERAMIC CHIP 4PF 0.25PF	50V
C2367	1-107-364-11	MYLAR 0.01µF 10%	200V
C2368	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C2370	1-107-746-11	ELECT 10µF 20%	200V
C2371	1-163-021-91	CERAMIC CHIP 0.01µF 10%	50V
C2372	1-163-021-91	CERAMIC CHIP 0.01µF 10%	50V
C2373	1-163-021-91	CERAMIC CHIP 0.01µF 10%	50V
C2374	1-126-394-11	ELECT CHIP 10µF 20%	16V
C2375	1-126-394-11	ELECT CHIP 10µF 20%	16V
C2376	1-126-394-11	ELECT CHIP 10µF 20%	16V
C2380	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C2381	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C2382	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C2383	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2384	1-163-009-11	CERAMIC CHIP 0.001µF 10%	50V
C2385	1-163-009-11	CERAMIC CHIP 0.001µF 10%	50V
C2386	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2387	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2388	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2389	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C2390	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C3301	1-126-394-11	ELECT CHIP 10µF 20%	16V
C3302	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C3303	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C3304	1-163-257-11	CERAMIC CHIP 180PF 5%	50V
C3305	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C3306	1-163-257-11	CERAMIC CHIP 180PF 5%	50V
C3307	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C3308	1-164-346-11	CERAMIC CHIP 1µF	16V
C3309	1-126-390-11	ELECT CHIP 22µF 20%	6.3V
C3311	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C3312	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C3313	1-163-263-11	CERAMIC CHIP 330PF 5%	50V
C3314	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C3316	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C3332	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C3333	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C3339	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C3341	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C3344	1-164-004-11	CERAMIC CHIP 0.1µF 10%	25V
C3350	1-164-005-11	CERAMIC CHIP 0.47µF	25V
C3402	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C3403	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C3405	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C3406	1-164-182-11	CERAMIC CHIP 0.0033µF 10%	50V
C3407	1-164-344-11	CERAMIC CHIP 0.068µF 10%	25V
C3408	1-126-394-11	ELECT CHIP 10µF 20%	16V
C3410	1-164-004-11	CERAMIC CHIP 0.1µF 10%	25V
C3411	1-163-259-91	CERAMIC CHIP 220PF 5%	50V
C3412	1-164-004-11	CERAMIC CHIP 0.1µF 10%	25V
C3432	1-163-035-00	CERAMIC CHIP 0.047µF	50V
C3433	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4300	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4302	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4303	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4350	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4351	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4352	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4353	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4354	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C4355	1-126-396-11	ELECT CHIP 47µF 20%	16V

<CONNECTOR>

CN301	1-764-334-11	PLUG, CONNECTOR 11P
CN302	* 1-564-511-11	PLUG, CONNECTOR 8P
CN303	* 1-564-510-11	PLUG, CONNECTOR 7P
CN305	* 1-564-509-11	PLUG, CONNECTOR 6P
CN307	* 1-564-512-11	PLUG, CONNECTOR 9P

Ref.No.	Part No.	Description	Remark
CN308	* 1-564-512-11	PLUG, CONNECTOR 9P	
CN411	* 1-506-611-11	PIN, CONNECTOR 8P	
CN412	* 1-506-611-11	PIN, CONNECTOR 8P	
CN421	* 1-779-070-21	PIN, CONNECTOR 12P	
CN422	* 1-779-070-21	PIN, CONNECTOR 12P	
	<DIODE>		
D1400	8-719-073-01	DIODE MA111-(K8).S0	
D1401	8-719-073-01	DIODE MA111-(K8).S0	
D1402	8-719-073-01	DIODE MA111-(K8).S0	
D1403	8-719-073-01	DIODE MA111-(K8).S0	
D1404	8-719-037-17	DIODE RD10SB3-T1	
D1405	8-719-073-01	DIODE MA111-(K8).S0	
D2345	8-719-157-72	DIODE RD22M-B	
D2346	8-719-901-83	DIODE 1SS83	
D2347	8-719-901-83	DIODE 1SS83	
D2348	8-719-073-01	DIODE MA111-(K8).S0	
D2349	8-719-073-01	DIODE MA111-(K8).S0	
D2355	8-719-157-72	DIODE RD22M-B	
D2356	8-719-901-83	DIODE 1SS83	
D2357	8-719-901-83	DIODE 1SS83	
D2358	8-719-073-01	DIODE MA111-(K8).S0	
D2359	8-719-073-01	DIODE MA111-(K8).S0	
D2365	8-719-157-72	DIODE RD22M-B	
D2366	8-719-901-83	DIODE 1SS83	
D2367	8-719-901-83	DIODE 1SS83	
D2369	8-719-073-01	DIODE MA111-(K8).S0	
D2370	8-719-073-01	DIODE MA111-(K8).S0	
D3301	8-719-016-74	DIODE 1SS352	
D3302	8-719-016-74	DIODE 1SS352	
D3307	8-719-800-76	DIODE 1SS226	
D3308	8-719-800-76	DIODE 1SS226	
D4401	8-719-036-88	DIODE RD4.7SB1-T1	
	<IC>		
IC300	8-759-011-65	IC MC74HC4053F	
IC301	8-759-011-65	IC MC74HC4053F	
IC302	8-759-011-65	IC MC74HC4053F	
IC303	8-759-981-48	IC TL082M	
IC304	8-759-981-48	IC TL082M	
IC305	8-759-981-48	IC TL082M	
IC306	8-752-054-80	IC CXA1521M	
IC307	8-752-054-80	IC CXA1521M	
IC308	8-752-054-80	IC CXA1521M	
IC400	8-752-053-21	IC CXA1211M	
IC401	8-752-053-21	IC CXA1211M	
IC1300	8-759-011-65	IC MC74HC4053F	
IC1302	8-759-011-65	IC MC74HC4053F	
IC1303	8-759-011-65	IC MC74HC4053F	
IC1304	8-759-011-65	IC MC74HC4053F	
IC1305	8-759-981-48	IC TL082M	
IC1306	8-759-981-48	IC TL082M	
IC1307	8-759-981-48	IC TL082M	
IC1308	8-759-011-65	IC MC74HC4053F	
IC1309	8-759-011-65	IC MC74HC4053F	
IC1400	8-759-038-15	IC MC74HC4538AF	
IC1401	8-752-067-05	IC CXA1739S	
IC2345	8-759-360-83	IC TDA6111Q/N4	
IC2355	8-759-360-83	IC TDA6111Q/N4	
IC2365	8-759-360-83	IC TDA6111Q/N4	
IC2380	8-759-523-02	IC TC74HC4053AFT(EL)	
IC2381	8-759-523-02	IC TC74HC4053AFT(EL)	
IC2382	8-759-988-13	IC LM393PS	
IC2383	8-759-083-94	IC TC7W74FU	
IC3301	8-759-523-02	IC TC74HC4053AFT(EL)	
IC3400	8-759-424-13	IC MC74HC00AFEL	
IC3401	8-759-032-14	IC MC74HC08AF	
IC3403	8-759-328-12	IC Z8622812PSC	
IC3404	8-759-527-74	IC M24C02-MN6T	
IC3406	8-759-084-79	IC TC7S14F	
IC3407	8-759-242-76	IC TC7W08F	
IC4300	8-752-072-94	IC CXA1875AM-T4	
IC4301	8-752-072-94	IC CXA1875AM-T4	
IC4302	8-752-072-94	IC CXA1875AM-T4	
IC4350	8-752-072-94	IC CXA1875AM-T4	
IC4351	8-759-482-47	IC M62399FP-TE2	
IC4352	8-759-482-47	IC M62399FP-TE2	
	<COIL>		
L300	1-406-669-11	INDUCTOR 470µH	
	<TRANSISTOR>		
Q300	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q301	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q302	8-729-920-59	TRANSISTOR IMX2-T109	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q330	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q331	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q332	8-729-920-59	TRANSISTOR IMX2-T109	
Q333	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q334	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q365	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q366	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q367	8-729-920-59	TRANSISTOR IMX2-T109	
Q368	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q369	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q450	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q451	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q452	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q453	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q460	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q461	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q462	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q463	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q464	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q465	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q466	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q485	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q486	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q487	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1300	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q1301	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q1302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1305	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1320	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q1321	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q1322	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1323	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1340	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q1341	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q1342	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1343	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1400	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

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Ref.No.	Part No.	Description	Remark
Q1402	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1410	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1411	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1412	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1413	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1414	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1420	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1421	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1422	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1423	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1424	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1430	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1431	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1432	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q1433	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1434	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1460	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1461	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1463	8-729-900-53	TRANSISTOR DTC114EK	
Q2303	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q2318	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q2333	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q2345	8-729-033-31	TRANSISTOR 2SK520K44K45-T1B	
Q2346	8-729-105-08	TRANSISTOR 2SA1330-06	
Q2355	8-729-033-31	TRANSISTOR 2SK520K44K45-T1B	
Q2356	8-729-105-08	TRANSISTOR 2SA1330-06	
Q2365	8-729-033-31	TRANSISTOR 2SK520K44K45-T1B	
Q2366	8-729-105-08	TRANSISTOR 2SA1330-06	
Q2375	8-729-105-37	TRANSISTOR 2SC3360-N16	
Q2375	8-729-105-37	TRANSISTOR 2SC3360-N16	
Q2376	8-729-105-37	TRANSISTOR 2SC3360-N16	
Q2376	8-729-105-37	TRANSISTOR 2SC3360-N16	
Q2377	8-729-105-37	TRANSISTOR 2SC3360-N16	
Q2377	8-729-105-37	TRANSISTOR 2SC3360-N16	
Q2380	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2381	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2382	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2383	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3301	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q3302	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q3303	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q3304	8-729-920-59	TRANSISTOR IMX2-T109	
Q3305	8-729-920-59	TRANSISTOR IMX2-T109	
Q3306	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3307	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q3308	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q3309	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3310	8-729-925-42	TRANSISTOR IMT2	
Q3311	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3312	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q3313	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3314	8-729-920-59	TRANSISTOR IMX2-T109	
Q3315	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q3316	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3317	8-729-925-42	TRANSISTOR IMT2	
Q3318	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q3319	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3402	1-801-806-11	TRANSISTOR DTC144EKA-T146	

<RESISTOR>

R300	1-216-049-91	RES,CHIP	1K	5%	1/10W
R301	1-216-025-91	RES,CHIP	100	5%	1/10W
R302	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R303	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R305	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R306	1-216-025-91	RES,CHIP	100	5%	1/10W
R307	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R308	1-216-025-91	RES,CHIP	100	5%	1/10W
R309	1-216-049-91	RES,CHIP	1K	5%	1/10W
R310	1-216-049-91	RES,CHIP	1K	5%	1/10W
R311	1-216-029-00	RES,CHIP	150	5%	1/10W
R312	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R313	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R314	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R315	1-218-764-11	METAL CHIP	330K	0.50%	1/10W
R316	1-216-033-00	RES,CHIP	220	5%	1/10W
R317	1-216-025-91	RES,CHIP	100	5%	1/10W
R318	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R319	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R320	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R321	1-216-089-91	RES,CHIP	47K	5%	1/10W
R322	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R323	1-216-025-91	RES,CHIP	100	5%	1/10W
R324	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R325	1-216-037-00	RES,CHIP	330	5%	1/10W
R330	1-216-049-91	RES,CHIP	1K	5%	1/10W
R331	1-216-025-91	RES,CHIP	100	5%	1/10W
R332	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R333	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R335	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R336	1-216-025-91	RES,CHIP	100	5%	1/10W
R337	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R338	1-216-025-91	RES,CHIP	100	5%	1/10W
R339	1-216-049-91	RES,CHIP	1K	5%	1/10W
R340	1-216-049-91	RES,CHIP	1K	5%	1/10W
R341	1-216-025-91	RES,CHIP	100	5%	1/10W
R342	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R343	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R344	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R345	1-218-770-11	METAL CHIP	560K	0.50%	1/10W
R346	1-216-033-00	RES,CHIP	220	5%	1/10W
R347	1-216-025-91	RES,CHIP	100	5%	1/10W
R348	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R349	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R350	1-218-759-11	METAL CHIP	200K	0.50%	1/10W
R351	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R353	1-216-089-91	RES,CHIP	47K	5%	1/10W
R354	1-216-025-91	RES,CHIP	100	5%	1/10W
R355	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R356	1-216-033-00	RES,CHIP	220	5%	1/10W
R365	1-216-049-91	RES,CHIP	1K	5%	1/10W
R366	1-216-025-91	RES,CHIP	100	5%	1/10W
R367	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R368	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R370	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R371	1-216-025-91	RES,CHIP	100	5%	1/10W
R372	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R373	1-216-025-91	RES,CHIP	100	5%	1/10W
R374	1-216-049-91	RES,CHIP	1K	5%	1/10W
R375	1-216-049-91	RES,CHIP	1K	5%	1/10W
R376	1-216-025-91	RES,CHIP	100	5%	1/10W
R377	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R378	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R379	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R380	1-218-770-11	METAL CHIP	560K	0.50%	1/10W
R381	1-216-033-00	RES,CHIP	220	5%	1/10W
R382	1-216-025-91	RES,CHIP	100	5%	1/10W
R383	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R384	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R385	1-218-759-11	METAL CHIP	200K	0.50%	1/10W

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Ref.No.	Part No.	Description			Remark
R386	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R388	1-216-089-91	RES,CHIP	47K	5%	1/10W
R389	1-216-025-91	RES,CHIP	100	5%	1/10W
R390	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R391	1-216-033-00	RES,CHIP	220	5%	1/10W
R450	1-216-025-91	RES,CHIP	100	5%	1/10W
R451	1-216-049-91	RES,CHIP	1K	5%	1/10W
R452	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R453	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R454	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R455	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R456	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R457	1-216-025-91	RES,CHIP	100	5%	1/10W
R458	1-216-025-91	RES,CHIP	100	5%	1/10W
R459	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R460	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R461	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R462	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R463	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R464	1-216-660-11	METAL CHIP	2.4K	0.50%	1/10W
R465	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R466	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R467	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R468	1-216-049-91	RES,CHIP	1K	5%	1/10W
R469	1-216-049-91	RES,CHIP	1K	5%	1/10W
R470	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R471	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R472	1-216-025-91	RES,CHIP	100	5%	1/10W
R473	1-216-049-91	RES,CHIP	1K	5%	1/10W
R474	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R475	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R476	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R477	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R478	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R479	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R480	1-216-025-91	RES,CHIP	100	5%	1/10W
R481	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R482	1-216-025-91	RES,CHIP	100	5%	1/10W
R483	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R484	1-216-021-91	RES,CHIP	68	5%	1/10W
R485	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R486	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R487	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R488	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R489	1-216-025-91	RES,CHIP	100	5%	1/10W
R490	1-216-049-91	RES,CHIP	1K	5%	1/10W
R491	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R492	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R493	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R494	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R495	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R497	1-216-025-91	RES,CHIP	100	5%	1/10W
R498	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R499	1-216-025-91	RES,CHIP	100	5%	1/10W
R1300	1-216-025-91	RES,CHIP	100	5%	1/10W
R1301	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1302	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1303	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R1305	1-216-025-91	RES,CHIP	100	5%	1/10W
R1306	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1307	1-216-025-91	RES,CHIP	100	5%	1/10W
R1308	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1309	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R1310	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1311	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1312	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1313	1-216-025-91	RES,CHIP	100	5%	1/10W
R1314	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1315	1-216-295-91	SHORT	0		
R1316	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1317	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R1318	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1319	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1320	1-216-025-91	RES,CHIP	100	5%	1/10W
R1321	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1322	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1323	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R1325	1-216-025-91	RES,CHIP	100	5%	1/10W
R1326	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1327	1-216-025-91	RES,CHIP	100	5%	1/10W
R1328	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1329	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R1330	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1331	1-216-025-91	RES,CHIP	100	5%	1/10W
R1332	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1333	1-216-295-91	SHORT	0		
R1334	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1335	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1340	1-216-025-91	RES,CHIP	100	5%	1/10W
R1341	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1342	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1343	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R1345	1-216-025-91	RES,CHIP	100	5%	1/10W
R1346	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1347	1-216-025-91	RES,CHIP	100	5%	1/10W
R1348	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1349	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R1350	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1351	1-216-025-91	RES,CHIP	100	5%	1/10W
R1352	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1353	1-216-295-91	SHORT	0		
R1354	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R1355	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R1357	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1358	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1400	1-216-025-91	RES,CHIP	100	5%	1/10W
R1402	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1405	1-216-025-91	RES,CHIP	100	5%	1/10W
R1406	1-216-025-91	RES,CHIP	100	5%	1/10W
R1407	1-216-025-91	RES,CHIP	100	5%	1/10W
R1408	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1409	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1410	1-216-025-91	RES,CHIP	100	5%	1/10W
R1411	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1412	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1413	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1414	1-216-295-91	SHORT	0		
R1415	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1416	1-216-025-91	RES,CHIP	100	5%	1/10W
R1417	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1418	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1419	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1420	1-216-095-00	RES,CHIP	82K	5%	1/10W
R1421	1-216-041-00	RES,CHIP	470	5%	1/10W
R1422	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1423	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1424	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1425	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1426	1-216-025-91	RES,CHIP	100	5%	1/10W
R1427	1-216-073-00	RES,CHIP	10K	5%	1/10W

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Ref.No.	Part No.	Description			Remark
R1428	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1429	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1430	1-216-095-00	RES,CHIP	82K	5%	1/10W
R1431	1-216-041-00	RES,CHIP	470	5%	1/10W
R1432	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1433	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1434	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1435	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1436	1-216-025-91	RES,CHIP	100	5%	1/10W
R1437	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1438	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1439	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1440	1-216-095-00	RES,CHIP	82K	5%	1/10W
R1441	1-216-041-00	RES,CHIP	470	5%	1/10W
R1442	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1443	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1444	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1445	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1446	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1447	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1450	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1451	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1452	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1453	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1454	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1455	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1456	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1457	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1460	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1461	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1464	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R1466	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1467	1-216-083-00	RES,CHIP	27K	5%	1/10W
R1469	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1470	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1471	1-216-690-11	METAL CHIP	43K	0.50%	1/10W
R1474	1-249-419-11	RES	1.5K	5%	1/4W
R1475	1-249-419-11	RES	1.5K	5%	1/4W
R1476	1-249-419-11	RES	1.5K	5%	1/4W
R1480	1-216-091-00	RES,CHIP	56K	5%	1/10W
R1482	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1483	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1484	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1485	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2294	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2295	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2296	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2297	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2300	1-216-025-91	RES,CHIP	100	5%	1/10W
R2310	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2312	1-216-295-91	SHORT	0		
R2313	1-216-017-91	RES,CHIP	47	5%	1/10W
R2315	1-216-025-91	RES,CHIP	100	5%	1/10W
R2325	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2327	1-216-295-91	SHORT	0		
R2328	1-216-017-91	RES,CHIP	47	5%	1/10W
R2330	1-216-025-91	RES,CHIP	100	5%	1/10W
R2340	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2342	1-216-295-91	SHORT	0		
R2343	1-216-017-91	RES,CHIP	47	5%	1/10W
R2345	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R2346	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R2347	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R2348	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2349	1-214-899-81	METAL	27K	1%	1/2W
R2350	1-216-689-11	RES,CHIP	39K	5%	1/10W
R2351	1-219-743-11	CARBON	100	5%	1/2W
R2352	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2353	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2354	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R2355	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R2356	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R2357	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R2358	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2359	1-214-899-81	METAL	27K	1%	1/2W
R2360	1-216-689-11	RES,CHIP	39K	5%	1/10W
R2361	1-219-743-11	CARBON	100	5%	1/2W
R2362	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2363	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2364	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R2365	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R2366	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R2367	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R2368	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2369	1-214-899-81	METAL	27K	1%	1/2W
R2370	1-216-689-11	RES,CHIP	39K	5%	1/10W
R2371	1-219-743-11	CARBON	100	5%	1/2W
R2372	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2373	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2374	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R2375	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2376	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2380	1-216-025-91	RES,CHIP	100	5%	1/10W
R2381	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R2382	1-216-025-91	RES,CHIP	100	5%	1/10W
R2383	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R2384	1-216-025-91	RES,CHIP	100	5%	1/10W
R2385	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R2386	1-216-025-91	RES,CHIP	100	5%	1/10W
R2387	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R2388	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2389	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2390	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R2391	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2392	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2393	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3299	1-216-025-91	RES,CHIP	100	5%	1/10W
R3300	1-216-025-91	RES,CHIP	100	5%	1/10W
R3301	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R3302	1-216-079-00	RES,CHIP	18K	5%	1/10W
R3303	1-216-091-00	RES,CHIP	56K	5%	1/10W
R3304	1-216-013-00	RES,CHIP	33	5%	1/10W
R3305	1-216-013-00	RES,CHIP	33	5%	1/10W
R3306	1-216-013-00	RES,CHIP	33	5%	1/10W
R3307	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3308	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3309	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3310	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3311	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3312	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3313	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R3314	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R3315	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3316	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R3317	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R3318	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R3319	1-216-083-00	RES,CHIP	27K	5%	1/10W
R3320	1-216-037-00	RES,CHIP	330	5%	1/10W
R3321	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R3322	1-216-097-91	RES,CHIP	100K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R3323	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3324	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R3325	1-216-041-00	RES,CHIP	470	5%	1/10W
R3326	1-216-029-00	RES,CHIP	150	5%	1/10W
R3327	1-216-111-00	RES,CHIP	390K	5%	1/10W
R3328	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3329	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R3330	1-216-676-11	METAL CHIP	11K	0.50%	1/10W
R3331	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R3332	1-216-075-00	RES,CHIP	12K	5%	1/10W
R3333	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R3334	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3335	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3336	1-216-640-11	METAL CHIP	360	0.50%	1/10W
R3337	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R3338	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3339	1-216-037-00	RES,CHIP	330	5%	1/10W
R3340	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R3341	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R3342	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3343	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R3344	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R3345	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3346	1-216-099-00	RES,CHIP	120K	5%	1/10W
R3347	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R3351	1-216-295-91	SHORT	0		
R3353	1-216-033-00	RES,CHIP	220	5%	1/10W
R3355	1-216-295-91	SHORT	0		
R3357	1-216-033-00	RES,CHIP	220	5%	1/10W
R3359	1-216-295-91	SHORT	0		
R3361	1-216-033-00	RES,CHIP	220	5%	1/10W
R3362	1-216-017-91	RES,CHIP	47	5%	1/10W
R3363	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3364	1-216-041-00	RES,CHIP	470	5%	1/10W
R3365	1-216-041-00	RES,CHIP	470	5%	1/10W
R3366	1-216-041-00	RES,CHIP	470	5%	1/10W
R3381	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R3382	1-216-031-00	RES,CHIP	180	5%	1/10W
R3385	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3400	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3401	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3402	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3403	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3410	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3411	1-216-025-91	RES,CHIP	100	5%	1/10W
R3412	1-216-025-91	RES,CHIP	100	5%	1/10W
R3413	1-216-025-91	RES,CHIP	100	5%	1/10W
R3414	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3416	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3417	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3418	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R3419	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3421	1-216-025-91	RES,CHIP	100	5%	1/10W
R3422	1-216-025-91	RES,CHIP	100	5%	1/10W
R3423	1-216-025-91	RES,CHIP	100	5%	1/10W
R3424	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3425	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3426	1-216-025-91	RES,CHIP	100	5%	1/10W
R3427	1-216-025-91	RES,CHIP	100	5%	1/10W
R3428	1-216-025-91	RES,CHIP	100	5%	1/10W
R3429	1-216-025-91	RES,CHIP	100	5%	1/10W
R3430	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3431	1-216-295-91	SHORT	0		
R3433	1-216-025-91	RES,CHIP	100	5%	1/10W
R3434	1-216-025-91	RES,CHIP	100	5%	1/10W

Ref.No.	Part No.	Description			Remark
R4300	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4301	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4302	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4303	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4304	1-216-033-00	RES,CHIP	220	5%	1/10W
R4305	1-216-033-00	RES,CHIP	220	5%	1/10W
R4306	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4307	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4308	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4309	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4310	1-216-033-00	RES,CHIP	220	5%	1/10W
R4311	1-216-033-00	RES,CHIP	220	5%	1/10W
R4312	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4313	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4314	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4315	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4316	1-216-033-00	RES,CHIP	220	5%	1/10W
R4317	1-216-033-00	RES,CHIP	220	5%	1/10W
R4320	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R4417	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4420	1-216-033-00	RES,CHIP	220	5%	1/10W
R4423	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4426	1-216-033-00	RES,CHIP	220	5%	1/10W
R4434	1-216-049-91	RES,CHIP	1K	5%	1/10W
R4435	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4436	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R4437	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R4438	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4439	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4440	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4441	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4442	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4443	1-216-033-00	RES,CHIP	220	5%	1/10W
R4444	1-216-033-00	RES,CHIP	220	5%	1/10W
R4445	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R4446	1-216-131-11	RES,CHIP	2.7M	5%	1/10W
R4447	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R4448	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R4449	1-216-131-11	RES,CHIP	2.7M	5%	1/10W
R4450	1-216-131-11	RES,CHIP	2.7M	5%	1/10W
R4451	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R4452	1-216-131-11	RES,CHIP	2.7M	5%	1/10W
R4453	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4454	1-216-033-00	RES,CHIP	220	5%	1/10W
R4455	1-216-033-00	RES,CHIP	220	5%	1/10W
R4456	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4457	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R4458	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4459	1-216-131-11	RES,CHIP	2.7M	5%	1/10W
R4460	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R4461	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R4462	1-216-131-11	RES,CHIP	2.7M	5%	1/10W
R4471	1-216-025-91	RES,CHIP	100	5%	1/10W
R4472	1-216-025-91	RES,CHIP	100	5%	1/10W

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* A-1131-463-A B1 MOUNT
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<CAPACITOR>

C401	1-126-396-11	ELECT CHIP	47µF	20%	16V
C402	1-126-396-11	ELECT CHIP	47µF	20%	16V
C403	1-163-031-11	CERAMIC CHIP	0.01µF		50V

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Ref.No.	Part No.	Description	Remark
C404	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C407	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C410	1-163-038-91	CERAMIC CHIP 0.1µF	25V
C411	1-165-319-11	CERAMIC CHIP 0.1µF	50V
C412	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C502	1-163-031-11	CERAMIC CHIP 0.01µF	50V
C503	1-163-031-11	CERAMIC CHIP 0.01µF	50V
	<CONNECTOR>		
CN401	* 1-568-015-11	SOCKET, CONNECTOR 8P	
CN402	* 1-568-015-11	SOCKET, CONNECTOR 8P	
	<DELAY LINE>		
DL400	1-411-450-11	DELAY LINE	
DL401	1-411-450-11	DELAY LINE	
DL402	1-234-455-21	DELAY LINE	
DL403	1-234-455-21	DELAY LINE	
DL404	1-411-451-11	DELAY LINE	
DL405	1-234-456-21	DELAY LINE	
DL501	1-402-770-11	DELAY LINE	
DL502	1-416-476-21	DELAY LINE	
DL503	1-402-770-11	DELAY LINE	
DL504	1-416-476-21	DELAY LINE	
	<IC>		
IC410	8-759-011-65	IC MC74HC4053F	
IC450	8-752-053-21	IC CXA1211M	
IC501	8-759-011-65	IC MC74HC4053F	
	<TRANSISTOR>		
Q400	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q403	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q404	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q405	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q406	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q407	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q408	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q409	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q410	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q411	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q412	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q413	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q414	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q501	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q502	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q503	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q504	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q505	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q506	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q512	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q513	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q514	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q515	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q516	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q517	8-729-112-65	TRANSISTOR 2SA1462-T1Y33	
Q518	8-729-107-31	TRANSISTOR 2SC3545-T43	

Ref.No.	Part No.	Description			Remark
	<RESISTOR>				
R400	1-216-025-91	RES,CHIP	100	5%	1/10W
R401	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R402	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R403	1-216-025-91	RES,CHIP	100	5%	1/10W
R404	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R405	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R406	1-216-025-91	RES,CHIP	100	5%	1/10W
R407	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R408	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R409	1-216-089-91	RES,CHIP	47K	5%	1/10W
R410	1-216-025-91	RES,CHIP	100	5%	1/10W
R411	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R412	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R413	1-216-025-91	RES,CHIP	100	5%	1/10W
R414	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R415	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R416	1-216-025-91	RES,CHIP	100	5%	1/10W
R417	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R418	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R419	1-216-085-00	RES,CHIP	33K	5%	1/10W
R420	1-216-025-91	RES,CHIP	100	5%	1/10W
R421	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R422	1-216-025-91	RES,CHIP	100	5%	1/10W
R423	1-216-025-91	RES,CHIP	100	5%	1/10W
R424	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R425	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R426	1-216-025-91	RES,CHIP	100	5%	1/10W
R427	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R428	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R429	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R430	1-216-025-91	RES,CHIP	100	5%	1/10W
R431	1-216-025-91	RES,CHIP	100	5%	1/10W
R432	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R433	1-216-075-00	RES,CHIP	12K	5%	1/10W
R434	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R435	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R436	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R437	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R438	1-216-073-00	RES,CHIP	10K	5%	1/10W
R439	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R440	1-216-049-91	RES,CHIP	1K	5%	1/10W
R441	1-216-295-91	SHORT	0		
R442	1-216-025-91	RES,CHIP	100	5%	1/10W
R443	1-216-025-91	RES,CHIP	100	5%	1/10W
R444	1-216-025-91	RES,CHIP	100	5%	1/10W
R501	1-216-025-91	RES,CHIP	100	5%	1/10W
R502	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R503	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R504	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R505	1-216-025-91	RES,CHIP	100	5%	1/10W
R506	1-216-025-91	RES,CHIP	100	5%	1/10W
R507	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R508	1-216-025-91	RES,CHIP	100	5%	1/10W
R509	1-216-037-00	RES,CHIP	330	5%	1/10W
R510	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R511	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R512	1-216-025-91	RES,CHIP	100	5%	1/10W
R513	1-216-025-91	RES,CHIP	100	5%	1/10W
R514	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R515	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R516	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R517	1-216-025-91	RES,CHIP	100	5%	1/10W
R518	1-216-025-91	RES,CHIP	100	5%	1/10W
R519	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R520	1-216-025-91	RES,CHIP	100	5%	1/10W

Ref.No.	Part No.	Description			Remark
R521	1-216-037-00	RES,CHIP	330	5%	1/10W
R522	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R523	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R524	1-216-025-91	RES,CHIP	100	5%	1/10W
R531	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R532	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R533	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R534	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R535	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R536	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R537	1-216-025-91	RES,CHIP	100	5%	1/10W
R538	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R541	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R542	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R543	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R544	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R545	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R546	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R547	1-216-025-91	RES,CHIP	100	5%	1/10W
R548	1-216-051-00	RES,CHIP	1.2K	5%	1/10W

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* A-1131-464-A B2 MOUNT
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<CAPACITOR>

C3901	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3902	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C3903	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C3904	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C3905	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	100V
C3906	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C3907	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C3908	1-164-346-11	CERAMIC CHIP	1µF		16V
C3909	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C3910	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3912	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C3913	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3914	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3915	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C3916	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3917	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3918	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3919	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3920	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3921	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
C3922	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
C3923	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3924	1-163-031-11	CERAMIC CHIP	0.01µF		50V

<CONNECTOR>

CN3901	* 1-573-896-11	SOCKET, CONNECTOR 12P	
CN3902	* 1-573-896-11	SOCKET, CONNECTOR 12P	

<DIODE>

D3901	8-719-016-74	DIODE 1SS352
D3902	8-719-016-74	DIODE 1SS352
D3903	8-719-016-74	DIODE 1SS352
D3904	8-719-016-74	DIODE 1SS352

Ref.No.	Part No.	Description			Remark

<IC>

IC3901	8-759-239-34	IC TC74HC4538AF
IC3902	8-759-523-02	IC TC74HC4053AFT(EL)
IC3904	8-759-239-34	IC TC74HC4538AF
IC3905	8-759-100-96	IC UPC4558G2
IC3906	8-759-234-20	IC TC7S08F
IC3907	8-759-035-90	IC SC7S02F
IC3908	8-759-082-61	IC TC4W53FU

<TRANSISTOR>

Q3901	8-729-027-38	TRANSISTOR DTA144EKA-T146
Q3902	8-729-027-38	TRANSISTOR DTA144EKA-T146
Q3903	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR
Q3905	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR
Q3906	8-729-027-38	TRANSISTOR DTA144EKA-T146
Q3907	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q3908	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR
Q3909	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR
Q3910	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR
Q3911	1-801-806-11	TRANSISTOR DTC144EKA-T146
Q3912	8-729-202-38	TRANSISTOR 2SC3326N-A
Q3913	8-729-202-38	TRANSISTOR 2SC3326N-A
Q3914	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q3915	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR
Q3916	8-729-120-28	TRANSISTOR 2SC1623-L5L6

<RESISTOR>

R3901	1-216-025-91	RES,CHIP	100	5%	1/10W
R3902	1-216-025-91	RES,CHIP	100	5%	1/10W
R3903	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3904	1-216-025-91	RES,CHIP	100	5%	1/10W
R3905	1-218-754-11	METAL CHIP	120K	0.50%	1/10W
R3906	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3907	1-218-753-11	METAL CHIP	110K	0.50%	1/10W
R3908	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R3909	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R3910	1-216-753-11	METAL CHIP	110K	0.50%	1/10W
R3912	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3913	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R3914	1-216-025-91	RES,CHIP	100	5%	1/10W
R3915	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R3916	1-216-025-91	RES,CHIP	100	5%	1/10W
R3917	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3918	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3919	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3920	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3922	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R3923	1-216-025-91	RES,CHIP	100	5%	1/10W
R3924	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R3925	1-216-697-91	METAL CHIP	82K	0.50%	1/10W
R3926	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3927	1-216-699-91	METAL CHIP	100K	0.50%	1/10W
R3928	1-216-025-91	RES,CHIP	100	5%	1/10W
R3929	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R3930	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R3931	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3932	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R3933	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R3934	1-216-025-91	RES,CHIP	100	5%	1/10W
R3935	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3936	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3937	1-216-025-91	RES,CHIP	100	5%	1/10W

B2 BX

Ref.No.	Part No.	Description			Remark
R3938	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3939	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3940	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3941	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3942	1-216-081-00	RES,CHIP	22K	5%	1/10W
R3943	1-216-055-00	RES,CHIP	1.8K	5%	1/10W
R3944	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3945	1-216-079-00	RES,CHIP	18K	5%	1/10W
R3946	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R3947	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3948	1-216-295-91	SHORT	0		

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* A-1136-013-A BX COMPL
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<CAPACITOR>

C010	1-128-526-11	ELECT	100µF	20%	16V
C011	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C012	1-128-526-11	ELECT	100µF	20%	16V
C013	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C014	1-128-526-11	ELECT	100µF	20%	16V
C015	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C016	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C017	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C018	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C019	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C020	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C021	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C022	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C050	1-128-526-11	ELECT	100µF	20%	16V
C051	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C052	1-128-526-11	ELECT	100µF	20%	16V
C053	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C054	1-128-526-11	ELECT	100µF	20%	16V
C055	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C056	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C057	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C058	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C059	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C060	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C061	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C062	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C101	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C102	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C103	1-107-701-11	ELECT	47µF	20%	16V
C104	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C106	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C201	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C202	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C203	1-107-701-11	ELECT	47µF	20%	16V
C204	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C206	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C301	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C302	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C303	1-107-701-11	ELECT	47µF	20%	16V
C304	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V
C306	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C401	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C402	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C403	1-107-701-11	ELECT	47µF	20%	16V
C404	1-107-725-11	CERAMIC CHIP	0.1µF	10%	16V

Ref.No.	Part No.	Description			Remark
C501	1-128-526-11	ELECT	100µF	20%	16V
C502	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C503	1-163-038-91	CERAMIC CHIP	0.1µF		25V

<CONNECTOR>

CN001	* 1-774-523-11	PIN, CONNECTOR (PC BOARD) 64P	

<DIODE>

D101	8-719-073-01	DIODE MA111-(K8).S0	
D102	8-719-073-01	DIODE MA111-(K8).S0	
D201	8-719-073-01	DIODE MA111-(K8).S0	
D202	8-719-073-01	DIODE MA111-(K8).S0	
D301	8-719-073-01	DIODE MA111-(K8).S0	
D302	8-719-073-01	DIODE MA111-(K8).S0	
D401	8-719-073-01	DIODE MA111-(K8).S0	
D402	8-719-073-01	DIODE MA111-(K8).S0	
D501	8-719-158-19	DIODE RD6.2SB	

<FILTER>

FL501	1-239-183-11	FILTER, EMI	
FL502	1-239-480-11	FILTER, EMI	
FL503	1-239-480-11	FILTER, EMI	

<IC>

IC010	8-759-460-74	IC BA05FP-E2	
IC050	8-759-539-89	IC LM2990SX-5.0	
IC501	8-759-594-41	IC MB89613R-651	
IC502	8-759-186-44	IC TC74VHC125F	
IC503	8-759-156-54	IC X25040SI	

<TRANSISTOR>

Q101	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q102	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q103	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q201	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q202	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q203	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q301	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q302	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q303	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q403	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q404	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q501	1-801-806-11	TRANSISTOR DTC144EKA-T146	

<RESISTOR>

R101	1-214-837-11	METAL	75	1%	1/2W
R102	1-216-089-91	RES,CHIP	47K	5%	1/10W
R103	1-216-025-91	RES,CHIP	100	5%	1/10W
R104	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R105	1-216-097-91	RES,CHIP	100K	5%	1/10W
R106	1-216-009-91	RES,CHIP	22	5%	1/10W
R107	1-216-025-91	RES,CHIP	100	5%	1/10W
R108	1-216-097-91	RES,CHIP	100K	5%	1/10W
R109	1-216-013-00	RES,CHIP	33	5%	1/10W
R201	1-214-837-11	METAL	75	1%	1/2W
R202	1-216-089-91	RES,CHIP	47K	5%	1/10W
R203	1-216-025-91	RES,CHIP	100	5%	1/10W
R204	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R205	1-216-097-91	RES,CHIP	100K	5%	1/10W
R206	1-216-009-91	RES,CHIP	22	5%	1/10W

Ref.No.	Part No.	Description			Remark
R207	1-216-025-91	RES,CHIP	100	5%	1/10W
R208	1-216-097-91	RES,CHIP	100K	5%	1/10W
R209	1-216-013-00	RES,CHIP	33	5%	1/10W
R301	1-214-837-11	METAL	75	1%	1/2W
R302	1-216-089-91	RES,CHIP	47K	5%	1/10W
R303	1-216-025-91	RES,CHIP	100	5%	1/10W
R304	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R305	1-216-097-91	RES,CHIP	100K	5%	1/10W
R306	1-216-009-91	RES,CHIP	22	5%	1/10W
R307	1-216-025-91	RES,CHIP	100	5%	1/10W
R308	1-216-097-91	RES,CHIP	100K	5%	1/10W
R309	1-216-013-00	RES,CHIP	33	5%	1/10W
R401	1-214-837-11	METAL	75	1%	1/2W
R402	1-216-089-91	RES,CHIP	47K	5%	1/10W
R403	1-216-049-91	RES,CHIP	1K	5%	1/10W
R404	1-216-097-91	RES,CHIP	100K	5%	1/10W
R405	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R406	1-216-009-91	RES,CHIP	22	5%	1/10W
R407	1-216-025-91	RES,CHIP	100	5%	1/10W
R408	1-216-097-91	RES,CHIP	100K	5%	1/10W
R409	1-216-013-00	RES,CHIP	33	5%	1/10W
R410	1-216-097-91	RES,CHIP	100K	5%	1/10W
R501	1-216-097-91	RES,CHIP	100K	5%	1/10W
R502	1-216-025-91	RES,CHIP	100	5%	1/10W
R503	1-216-025-91	RES,CHIP	100	5%	1/10W
R504	1-216-097-91	RES,CHIP	100K	5%	1/10W
R505	1-216-025-91	RES,CHIP	100	5%	1/10W
R506	1-216-097-91	RES,CHIP	100K	5%	1/10W
R507	1-216-025-91	RES,CHIP	100	5%	1/10W
R508	1-216-097-91	RES,CHIP	100K	5%	1/10W
R509	1-216-097-91	RES,CHIP	100K	5%	1/10W
R510	1-216-097-91	RES,CHIP	100K	5%	1/10W
R511	1-216-097-91	RES,CHIP	100K	5%	1/10W
R512	1-216-097-91	RES,CHIP	100K	5%	1/10W
R513	1-216-097-91	RES,CHIP	100K	5%	1/10W
R514	1-216-097-91	RES,CHIP	100K	5%	1/10W
R515	1-216-097-91	RES,CHIP	100K	5%	1/10W
R516	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R517	1-216-097-91	RES,CHIP	100K	5%	1/10W
R518	1-216-097-91	RES,CHIP	100K	5%	1/10W

<TERMINAL BOARD>

TB001	1-694-601-11	TERMINAL BOARD ASSY, I/O	

<TEST PIN>

TP001	* 1-537-864-11	PIN, POST	
TP010	* 1-537-864-11	PIN, POST	

<CRYSTAL>

X501	1-578-689-21	VIBRATOR (8 MHz)	

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	* A-1331-957-A	C MOUNT	
		**********	
	* 4-376-132-11	COVER(REAR LID), CV VOL	
	* 4-376-133-11	COVER(MAIN), CV VOL	

Ref.No.	Part No.	Description			Remark

<CAPACITOR>

C701	1-162-114-00	CERAMIC	0.0047µF		2KV
C702	1-104-665-11	ELECT	100µF	20%	25V
C703	1-162-114-00	CERAMIC	0.0047µF		2KV
C710	1-161-830-00	CERAMIC	0.0047µF		500V

<CONNECTOR>

CN701	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN702	* 1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN703	* 1-564-509-11	PLUG, CONNECTOR 6P	

<COMPOSITION CIRCUIT BLOCK>

CP701	1-453-105-11	CR PACK, HIGH-VOLTAGE	

<DIODE>

D701	8-719-911-19	DIODE 1SS119-25	

<JACK>

J701	1-251-244-11	SOCKET, CRT	

<COIL>

L701	1-408-608-31	INDUCTOR	27µH
L702	1-408-601-31	INDUCTOR	6.8µH
L703	1-408-601-31	INDUCTOR	6.8µH
L704	1-408-601-31	INDUCTOR	6.8µH

<TRANSISTOR>

Q701	8-729-020-07	TRANSISTOR 2SC4686A(LBSONY)	

<RESISTOR>

R701	1-219-747-91	CARBON	2.2K	5%	1/2W
R702	1-219-747-91	CARBON	2.2K	5%	1/2W
R703	1-219-747-91	CARBON	2.2K	5%	1/2W
R704	1-219-752-11	CARBON	100K	5%	1/2W
R706	1-219-753-11	CARBON	220K	5%	1/2W
R707	1-219-752-11	CARBON	100K	5%	1/2W
R708	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-417-11	CARBON	1K	5%	1/4W

<VARIABLE RESISTOR>

RV701	⚠1-230-164-00	RES, ADJ, METAL GLAZE 55M	

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	* A-1335-118-A	D COMPL	
		**********	
	4-048-257-01	HOLDER (C), TR	
	4-381-907-01	INSULATOR (A)	
	4-382-854-11	SCREW(M3X10), P, SW (+)	

<CAPACITOR>

C1600	1-107-914-11	ELECT	1000µF	20%	25V
C1601	1-128-526-11	ELECT	100µF	20%	25V
C1602	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1603	1-126-096-11	ELECT	10µF	20%	35V
C1604	1-124-589-11	ELECT	47µF	20%	16V

D

Ref.No.	Part No.	Description			Remark
C1605	1-124-589-11	ELECT	47µF	20%	16V
C1606	1-126-096-11	ELECT	10µF	20%	35V
C1607	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1608	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C1609	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C1610	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1611	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C1612	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1615	1-128-077-11	ELECT	22µF	20%	25V
C1616	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1617	1-126-096-11	ELECT	10µF	20%	35V
C1618	1-107-914-11	ELECT	1000µF	20%	25V
C1619	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1620	1-128-339-11	ELECT	2200µF	20%	6.3V
C1621	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1622	1-104-653-11	ELECT	220µF	20%	6.3V
C1623	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1625	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C2501	1-107-889-11	ELECT	220µF	20%	25V
C2502	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2503	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2504	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C2505	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V
C2506	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2507	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2508	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C2509	1-107-909-11	ELECT	47µF	20%	16V
C2510	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2511	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C2512	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C2513	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C2514	1-163-809-11	CERAMIC CHIP	0.047µF	10%	25V
C2515	1-107-906-11	ELECT	10µF	20%	50V
C2516	1-164-222-11	CERAMIC CHIP	0.22µF		25V
C2517	1-164-346-11	CERAMIC CHIP	1µF		16V
C2518	1-107-910-11	ELECT	100µF	20%	50V
C2519	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C2520	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C2522	1-127-820-91	CERAMIC	4.7µF	0	16V
C2523	1-125-827-91	CERAMIC CHIP	1µF	10%	25V
C2524	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C2525	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2526	1-164-344-11	CERAMIC CHIP	0.068µF	10%	25V
C2527	1-127-820-91	CERAMIC	4.7µF	0	16V
C2528	1-126-163-11	ELECT	4.7µF	20%	25V
C2529	1-125-838-91	CERAMIC CHIP	2.2µF		6.3V
C2530	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2531	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2532	1-107-884-11	ELECT	1000µF	20%	16V
C2533	1-107-884-11	ELECT	1000µF	20%	16V
C2534	1-107-910-11	ELECT	100µF	20%	50V
C2535	1-106-228-00	MYLAR	0.22µF	10%	100V
C2536	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C2537	1-126-964-11	ELECT	10µF	20%	50V
C2538	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C2539	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C2540	1-162-318-11	CERAMIC	0.001µF	10%	500V
C2541	1-107-364-11	MYLAR	0.01µF	10%	200V
C2542	1-124-628-11	ELECT	220µF	20%	100V
C2543	1-107-906-11	ELECT	10µF	20%	50V
C2544	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2545	1-162-129-91	CERAMIC	150PF	10%	2KV
C2546	1-117-828-31	FILM	3300PF	3%	1.5KV
C2549	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2550	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C2551	1-163-809-11	CERAMIC CHIP	0.047µF	10%	25V
C2552	1-164-346-11	CERAMIC CHIP	1µF		16V
C2553	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C2554	1-126-176-11	ELECT	220µF	20%	10V
C2556	1-162-558-11	CERAMIC	100PF	10%	2KV
C2557	1-130-061-91	FILM	0.0015µF	5%	630V
C2558	1-162-558-11	CERAMIC	100PF	10%	2KV
C2559	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2560	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2561	1-107-746-11	ELECT	10µF	20%	200V
C2562	1-115-522-11	FILM	1µF	5%	250V
C2563	1-117-673-11	FILM	1.5µF	5%	250V
C2564	1-117-674-11	FILM	1.8µF	5%	250V
C2565	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2566	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2567	1-107-909-11	ELECT	47µF	20%	16V
C2568	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2569	1-128-954-11	ELECT	1000µF	20%	25V
C2570	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2571	1-107-909-11	ELECT	47µF	20%	16V
C2572	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2575	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2576	1-107-902-11	ELECT	1µF	20%	50V
C2577	1-125-898-91	CERAMIC CHIP	0.22µF	10%	50V
C2578	1-107-905-11	ELECT	4.7µF	20%	50V
C2579	1-128-526-11	ELECT	100µF	20%	16V
C2580	1-125-838-91	CERAMIC CHIP	2.2µF		6.3V
C2582	1-107-909-11	ELECT	47µF	20%	16V
C2583	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2584	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2586	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
C2587	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2588	1-107-909-11	ELECT	47µF	20%	16V
C2589	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C2592	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C2593	1-124-589-11	ELECT	47µF	20%	16V
C2594	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2595	1-104-555-11	FILM CHIP	0.022µF	5%	16V
C2601	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2602	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C2603	1-164-505-11	CERAMIC CHIP	2.2µF		16V
C2604	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2605	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C2606	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2607	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C2608	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2609	1-128-077-11	ELECT	22µF	20%	25V
C2610	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C2611	1-126-096-11	ELECT	10µF	20%	35V
C2612	1-107-914-11	ELECT	1000µF	20%	25V
C2613	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2614	1-128-339-11	ELECT	2200µF	20%	10V
C2616	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2617	1-107-889-11	ELECT	220µF	20%	10V
C2618	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2619	1-104-653-11	ELECT	220µF	20%	6.3V
C2620	1-107-914-11	ELECT	1000µF	20%	25V
C2621	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2622	1-128-339-11	ELECT	2200µF	20%	10V
C2623	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2624	1-107-889-11	ELECT	220µF	20%	10V
C2625	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C2626	1-104-653-11	ELECT	220µF	20%	6.3V
C2627	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C2628	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V

Ref.No.	Part No.	Description				Remark
C2631	1-127-573-91	CERAMIC CHIP	1µF	10%	16V	
C3501	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C3502	1-107-877-11	ELECT	1000µF	20%	10V	
C3503	1-163-021-91	CERAMIC CHIP	0.01µF		50V	
C3504	1-163-021-91	CERAMIC CHIP	0.01µF		50V	
C3505	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3506	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3509	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C3510	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3511	1-163-021-91	CERAMIC CHIP	0.01µF		50V	
C3512	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3513	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C3515	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C3516	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3517	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3518	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C3519	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3520	1-125-838-91	CERAMIC CHIP	2.2µF	10%	6.3V	
C3521	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C3522	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	
C3523	1-127-820-91	CERAMIC	4.7µF	0	16V	
C3524	1-104-664-11	ELECT	47µF	20%	16V	
C3526	1-128-526-11	ELECT	100µF	20%	16V	
C3527	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	
C3529	1-137-374-11	MYLAR	0.047µF	5%	50V	
C3531	1-163-275-11	CERAMIC	0.001µF	5%	50V	
C3601	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3602	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V	
C3603	1-164-505-11	CERAMIC CHIP	2.2µF		16V	
C3604	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C3605	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C3606	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3607	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V	
C3608	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C3609	1-128-077-11	ELECT	22µF	20%	25V	
C3610	1-165-319-11	CERAMIC CHIP	0.1µF		50V	
C3611	1-126-096-11	ELECT	10µF	20%	35V	
C3612	1-107-914-11	ELECT	1000µF	20%	25V	
C3613	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3614	1-107-884-11	ELECT	1000µF	20%	16V	
C3615	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3616	1-128-526-11	ELECT	100µF	20%	16V	
C3617	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3618	1-107-909-11	ELECT	47µF	20%	35V	
C3619	1-107-914-11	ELECT	1000µF	20%	25V	
C3620	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3621	1-128-528-11	ELECT	470µF	20%	16V	
C3622	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3623	1-104-653-11	ELECT	220µF	20%	16V	
C3624	1-104-653-11	ELECT	220µF	20%	16V	
C3625	1-128-526-11	ELECT	100µF	20%	16V	
C3626	1-163-031-11	CERAMIC CHIP	0.01µF		50V	
C3627	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C3628	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C3629	1-107-884-11	ELECT	1000µF	20%	16V	
C3630	1-128-526-11	ELECT	100µF	20%	16V	
C3631	1-127-573-91	CERAMIC CHIP	1µF	10%	16V	
C3632	1-128-526-11	ELECT	100µF	20%	16V	

<CONNECTOR>

CN1601	* 1-766-175-11	PIN, CONNECTOR (PC BOARD) 5P	
CN1602	* 1-580-843-11	PIN, CONNECTOR (POWER)	
CN2501	* 1-564-714-11	PIN, CONNECTOR (SMALL TYPE)12P	
CN2502	* 1-564-510-11	PLUG, CONNECTOR 7P	
CN2503	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE)10P	
CN2504	* 1-793-239-11	PIN, CONNECTOR (PC BOARD) 6P	
CN2505	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN2506	* 1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P	
CN2601	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P	
CN2602	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P	

<DIODE>

D1601	8-719-210-43	DIODE EC10QS-06
D1602	8-719-073-01	DIODE MA111-(K8).S0
D1603	8-719-978-24	DIODE DTZ-TT11-5.6A
D1604	8-719-158-57	DIODE RD15SB2
D1605	8-719-037-00	DIODE RD6.2SB2-T1
D1606	8-719-037-00	DIODE RD6.2SB2-T1
D1607	8-719-073-01	DIODE MA111-(K8).S0
D1608	8-719-073-01	DIODE MA111-(K8).S0
D1609	8-719-073-01	DIODE MA111-(K8).S0
D1610	8-719-037-39	DIODE RD18SB2-T1
D1611	8-719-059-22	DIODE NSQ03A06-TE16L
D2501	8-719-988-72	DIODE SC802-06
D2504	8-719-073-01	DIODE MA111-(K8).S0
D2505	8-719-029-04	DIODE D5L60
D2506	8-719-073-01	DIODE MA111-(K8).S0
D2507	8-719-073-01	DIODE MA111-(K8).S0
D2509	8-719-977-95	DIODE DTZ-TT11-2.4B
D2511	8-719-158-49	DIODE RD12SB2
D2512	8-719-158-49	DIODE RD12SB2
D2513	8-719-073-01	DIODE MA111-(K8).S0
D2515	8-719-073-01	DIODE MA111-(K8).S0
D2516	8-719-158-49	DIODE RD12SB2
D2517	8-719-073-01	DIODE MA111-(K8).S0
D2519	8-719-073-01	DIODE MA111-(K8).S0
D2520	8-719-073-01	DIODE MA111-(K8).S0
D2521	8-719-073-01	DIODE MA111-(K8).S0
D2522	8-719-158-49	DIODE RD12SB2
D2523	8-719-988-72	DIODE SC802-06
D2524	8-719-073-01	DIODE MA111-(K8).S0
D2525	8-719-073-01	DIODE MA111-(K8).S0
D2526	8-719-073-01	DIODE MA111-(K8).S0
D2527	8-719-159-13	DIODE RD5.1SB3-T2
D2528	8-719-073-01	DIODE MA111-(K8).S0
D2529	8-719-073-01	DIODE MA111-(K8).S0
D2530	8-719-073-01	DIODE MA111-(K8).S0
D2532	8-719-033-53	DIODE RD6.8SB2-T1
D2533	8-719-951-30	DIODE ERA91-02
D2601	8-719-059-22	DIODE NSQ03A06-TE16L
D2602	8-719-037-39	DIODE RD18SB2-T1
D2604	8-719-059-22	DIODE NSQ03A06-TE16L
D2605	8-719-037-39	DIODE RD18SB2-T1
D3601	8-719-059-22	DIODE NSQ03A06-TE16L
D3603	8-719-210-43	DIODE EC10QS-06
D3604	8-719-059-22	DIODE NSQ03A06-TE16L
D3605	8-719-210-43	DIODE EC10QS-06
D3606	8-719-210-43	DIODE EC10QS-06
D3607	8-719-059-22	DIODE NSQ03A06-TE16L
D3608	8-719-037-39	DIODE RD18SB2-T1
D3609	8-719-037-39	DIODE RD18SB2-T1

<FUSE>

F1601	⚠1-576-048-11	FUSE, GLASS TUBE 10A/125V
F1602	⚠1-576-048-11	FUSE, GLASS TUBE 10A/125V

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Ref.No.	Part No.	Description	Remark
	<FUSE HOLDER>		
FH1	⚠1-533-183-11	HOLDER, FUSE	
FH2	⚠1-533-183-11	HOLDER, FUSE	
FH3	⚠1-533-183-11	HOLDER, FUSE	
FH4	⚠1-533-183-11	HOLDER, FUSE	
	<IC>		
IC1601	8-759-908-15	IC TL431CLP	
IC1602	8-759-261-48	IC TL1451ACPWR	
IC2501	8-752-072-94	IC CXA1875AM-T4	
IC2502	8-752-072-94	IC CXA1875AM-T4	
IC2503	8-759-593-29	IC TDA9106	
IC2504	8-759-980-58	IC TDA8172	
IC2505	8-759-239-34	IC TC74HC4538AF	
IC2506	8-759-981-48	IC TL082M	
IC2507	8-759-803-42	IC LA6500-FA	
IC2508	8-759-209-90	IC TC4S71F	
IC2509	8-759-239-34	IC TC74HC4538AF	
IC2510	8-759-981-48	IC TL082M	
IC2512	8-759-981-48	IC TL082M	
IC2513	8-759-239-34	IC TC74HC4538AF	
IC2514	8-759-209-69	IC TC4S11F	
IC2515	8-759-209-69	IC TC4S11F	
IC2516	8-759-231-30	IC TC-4S30F	
IC2517	8-759-231-30	IC TC-4S30F	
IC2518	8-759-100-96	IC UPC4558G2	
IC2519	8-759-981-48	IC TL082M	
IC2521	8-759-209-69	IC TC4S11F	
IC2522	8-759-209-69	IC TC4S11F	
IC2523	8-759-239-34	IC TC74HC4538AF	
IC2601	8-759-261-48	IC TL1451ACPWR	
IC2602	8-759-450-47	IC BA05T	
IC2603	8-759-247-67	IC LM2990T-5.0	
IC3601	8-759-261-48	IC TL1451ACPWR	
	<COIL>		
L1601	1-419-396-11	INDUCTOR 47µH	
L1603	1-469-563-11	INDUCTOR 5.6µH	
L1604	1-406-660-41	INDUCTOR 15µH	
L2501	1-410-482-31	INDUCTOR 100µH	
L2502	1-410-482-31	INDUCTOR 100µH	
L2503	1-406-975-21	INDUCTOR 47µH	
L2504	1-419-437-11	CHOKE	
L2505	1-419-307-11	COIL, HORIZONTAL LINEARITY	
L2506	1-408-623-31	INDUCTOR 470µH	
L2509	1-419-305-11	COIL, HORIZONTAL LINEARITY	
L2510	1-410-067-21	INDUCTOR 4.7mH	
L2511	1-406-661-11	INDUCTOR 22µH	
L2601	1-419-397-11	INDUCTOR 68µH	
L2603	1-406-660-41	INDUCTOR 15µH	
L2604	1-419-397-11	INDUCTOR 68µH	
L2605	1-406-660-41	INDUCTOR 15µH	
L3601	1-406-665-11	INDUCTOR 100µH	
L3602	1-419-398-11	INDUCTOR 220µH	
L3603	1-406-667-41	INDUCTOR 220µH	
	<TRANSISTOR>		
Q1601	8-729-920-59	TRANSISTOR IMX2-T109	
Q1602	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q1603	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q1604	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1605	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q1608	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1609	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1610	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1611	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1612	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q1613	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q1614	8-729-041-37	TRANSISTOR 2SJ377(TE16L)	
Q1617	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q2502	8-729-925-42	TRANSISTOR IMT2	
Q2503	8-729-925-42	TRANSISTOR IMT2	
Q2507	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q2508	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q2509	8-729-926-77	TRANSISTOR IRFI640	
Q2510	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
Q2511	8-729-033-25	TRANSISTOR DTC114GKA	
Q2512	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q2513	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q2514	8-729-048-07	TRANSISTOR 2SD2578-CA	
Q2516	8-729-800-32	TRANSISTOR 2SC2362K-G	
Q2517	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q2519	8-729-050-72	TRANSISTOR 2SK2231-TP	
Q2520	8-729-050-72	TRANSISTOR 2SK2231-TP	
Q2521	8-729-900-53	TRANSISTOR DTC114EK	
Q2522	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2523	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2524	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q2525	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2526	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2527	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2528	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2529	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q2530	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2531	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q2532	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2533	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2534	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2535	8-729-050-72	TRANSISTOR 2SK2231-TP	
Q2601	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2602	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2603	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2604	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2605	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q2606	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q2607	8-729-041-37	TRANSISTOR 2SJ377(TE16L)	
Q2609	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2610	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q2611	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q2612	8-729-041-37	TRANSISTOR 2SJ377(TE16L)	
Q3601	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q3602	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q3603	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q3604	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3605	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q3606	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q3607	8-729-041-37	TRANSISTOR 2SJ377(TE16L)	
Q3609	8-729-050-72	TRANSISTOR 2SK2231-TP	
Q3610	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3611	8-729-824-24	TRANSISTOR 2SA1338-5-TB	
Q3612	8-729-019-85	TRANSISTOR 2SC3392-5-TB	
Q3613	8-729-041-37	TRANSISTOR 2SJ377(TE16L)	
	<RESISTOR>		
R1601	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R1602	1-216-682-11	METAL CHIP 20K 0.50% 1/10W	

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Ref.No.	Part No.	Description			Remark
R1603	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R1605	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1606	1-216-055-00	RES,CHIP	1.8K	5%	1/10W
R1607	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1608	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1609	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1611	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1612	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1613	1-216-099-00	RES,CHIP	120K	5%	1/10W
R1614	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1615	1-216-093-91	RES,CHIP	68K	5%	1/10W
R1616	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1617	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R1618	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R1619	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R1620	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1621	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1624	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1625	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1626	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1627	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1628	1-216-009-91	RES,CHIP	22	5%	1/10W
R1629	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1630	1-249-377-11	CARBON	0.47	5%	1/4W F
R1631	1-249-377-11	CARBON	0.47	5%	1/4W F
R1632	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2501	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2502	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2503	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2504	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2505	1-216-025-91	RES,CHIP	100	5%	1/10W
R2506	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R2507	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R2508	1-216-001-00	RES,CHIP	10	5%	1/10W
R2509	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R2510	1-216-043-91	RES,CHIP	560	5%	1/10W
R2511	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2512	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2513	1-216-079-00	RES,CHIP	18K	5%	1/10W
R2514	1-216-041-00	RES,CHIP	470	5%	1/10W
R2515	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2516	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2517	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2518	1-216-041-00	RES,CHIP	470	5%	1/10W
R2519	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2520	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R2521	1-215-863-11	METAL OXIDE	100	5%	1W F
R2524	1-216-085-00	RES,CHIP	33K	5%	1/10W
R2525	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R2526	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R2527	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2528	1-216-111-00	RES,CHIP	390K	5%	1/10W
R2529	1-216-113-00	RES,CHIP	470K	5%	1/10W
R2530	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2531	1-216-077-91	RES,CHIP	15K	5%	1/10W
R2532	1-216-077-91	RES,CHIP	15K	5%	1/10W
R2533	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2534	1-249-393-11	CARBON	10	5%	1/4W F
R2535	1-249-393-11	CARBON	10	5%	1/4W F
R2536	1-216-676-11	METAL CHIP	11K	0.50%	1/10W
R2537	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R2538	1-249-383-11	CARBON	1.5	5%	1/4W F
R2539	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R2540	1-216-676-11	METAL CHIP	11K	0.50%	1/10W
R2541	1-216-431-11	METAL OXIDE	560	5%	1W F

Ref.No.	Part No.	Description			Remark
R2542	1-216-359-00	METAL OXIDE	6.8	5%	1W F
R2543	1-216-359-00	METAL OXIDE	6.8	5%	1W F
R2545	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R2550	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2551	1-216-001-00	RES,CHIP	10	5%	1/10W
R2552	1-216-699-91	METAL CHIP	100K	0.50%	1/10W
R2553	1-216-679-91	RES,CHIP	15K	5%	1/10W
R2554	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R2555	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2556	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2557	1-216-001-00	RES,CHIP	10	5%	1/10W
R2558	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2559	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2560	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R2561	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2562	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R2563	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2564	1-216-369-00	METAL OXIDE	1	5%	2W F
R2565	1-249-381-11	CARBON	1	5%	1/4W F
R2566	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2568	1-216-037-00	RES,CHIP	330	5%	1/10W
R2569	1-249-429-11	CARBON	10K	5%	1/4W
R2570	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R2571	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2572	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2573	1-215-887-00	METAL OXIDE	150	5%	2W F
R2575	1-249-403-11	CARBON	68	5%	1/4W F
R2576	1-216-482-11	METAL OXIDE	1.8K	5%	3W F
R2577	1-216-425-11	METAL OXIDE	56	5%	1W F
R2578	1-216-424-11	METAL OXIDE	39	5%	1W F
R2579	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2580	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2581	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2582	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2584	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2589	1-249-429-11	CARBON	10K	5%	1/4W
R2590	1-216-081-00	RES,CHIP	22K	5%	1/10W
R2591	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2592	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2593	1-249-435-11	CARBON	33K	5%	1/4W
R2594	1-249-417-11	CARBON	1K	5%	1/4W
R2595	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2596	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2597	1-216-097-91	RES,CHIP	100K	5%	1/10W
R2598	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2599	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2601	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2602	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2603	1-216-099-00	RES,CHIP	120K	5%	1/10W
R2604	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2605	1-216-093-91	RES,CHIP	68K	5%	1/10W
R2606	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2607	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R2608	1-216-662-11	METAL CHIP	3K	0.50%	1/10W
R2609	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R2610	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2611	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2612	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2613	1-216-684-91	METAL CHIP	24K	0.50%	1/10W
R2614	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R2615	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R2616	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2617	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2618	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2619	1-216-009-91	RES,CHIP	22	5%	1/10W

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Ref.No.	Part No.	Description			Remark
R2620	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2625	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2626	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2627	1-216-009-91	RES,CHIP	22	5%	1/10W
R2628	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R2629	1-249-377-11	CARBON	0.47	5%	1/4W F
R2630	1-249-377-11	CARBON	0.47	5%	1/4W F
R3500	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R3501	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R3502	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R3503	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R3504	1-218-754-11	METAL CHIP	120K	0.50%	1/10W
R3505	1-249-431-11	CARBON	15K	5%	1/4W
R3506	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3507	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3508	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3509	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3510	1-216-025-91	RES,CHIP	100	5%	1/10W
R3511	1-216-025-91	RES,CHIP	100	5%	1/10W
R3512	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R3513	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3514	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3515	1-216-025-91	RES,CHIP	100	5%	1/10W
R3516	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3517	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3518	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3519	1-216-059-00	RES,CHIP	2.7K	5%	1/10W
R3520	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3521	1-216-113-00	RES,CHIP	470K	5%	1/10W
R3522	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3525	1-216-025-91	RES,CHIP	100	5%	1/10W
R3526	1-216-025-91	RES,CHIP	100	5%	1/10W
R3527	1-216-113-00	RES,CHIP	470K	5%	1/10W
R3528	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3529	1-216-697-91	METAL CHIP	82K	0.50%	1/10W
R3530	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R3531	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3532	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3533	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3534	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3535	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3545	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3546	1-216-081-00	RES,CHIP	22K	5%	1/10W
R3547	1-216-091-00	RES,CHIP	56K	5%	1/10W
R3548	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3550	1-216-093-91	RES,CHIP	68K	5%	1/10W
R3551	1-216-453-00	METAL OXIDE	270	5%	2W F
R3552	1-216-475-11	METAL OXIDE	120	5%	3W F
R3553	1-216-346-00	METAL OXIDE	0.56	5%	1W F
R3554	1-215-861-00	METAL OXIDE	47	5%	1W F
R3556	1-216-107-00	RES,CHIP	270K	5%	1/10W
R3557	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3558	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R3560	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3601	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R3602	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R3603	1-216-099-00	RES,CHIP	120K	5%	1/10W
R3604	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3605	1-216-093-91	RES,CHIP	68K	5%	1/10W
R3606	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R3607	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R3608	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R3609	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R3610	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R3611	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R3612	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3613	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R3614	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R3615	1-216-662-11	METAL CHIP	3K	0.50%	1/10W
R3616	1-216-089-91	RES,CHIP	47K	5%	1/10W
R3617	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3618	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3619	1-216-009-91	RES,CHIP	22	5%	1/10W
R3620	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3621	1-216-009-91	RES,CHIP	22	5%	1/10W
R3622	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3627	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3628	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3629	1-216-009-91	RES,CHIP	22	5%	1/10W
R3630	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3631	1-249-425-11	CARBON	4.7K	5%	1/4W F
R3632	1-249-413-11	CARBON	470	5%	1/4W F
R3633	1-249-413-11	CARBON	470	5%	1/4W F
R3634	1-249-377-11	CARBON	0.47	5%	1/4W F
R3635	1-249-377-11	CARBON	0.47	5%	1/4W F
R3636	1-249-393-11	CARBON	10	5%	1/4W F
R3637	1-249-381-11	CARBON	1	5%	1/4W F
R3638	1-249-381-11	CARBON	1	5%	1/4W F
		<RELAY>			
RY1601	1-755-018-11	RELAY			
RY2501	1-755-198-11	RELAY, AC POWER			
		<TRANSFORMER>			
T2501	1-419-437-11	CHOKE			
T2502	1-431-443-11	TRANSFORMER, FERRITE (HST)			
T2503	1-433-978-11	TRANSFORMER, HORIZONTAL DRIVE			
T2504	1-419-438-11	CHOKE			
T3601	1-435-157-11	TRANSFORMER, DC-DC CONVERTER			

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	* A-1316-460-A	G COMPL			
		**********			
	4-382-854-01	SCREW(M3X8), P, SW (+)			
		<CAPACITOR>			
C601	⚠1-113-900-11	CERAMIC	470PF	10%	250V
C602	⚠1-104-708-11	MYLAR	0.47µF	20%	250V
C603	⚠1-104-706-11	MYLAR	0.22µF	20%	250V
C604	⚠1-113-926-11	CERAMIC	0.0047µF		250V
C605	⚠1-113-900-11	CERAMIC	470PF	10%	250V
C606	⚠1-113-926-11	CERAMIC	0.0047µF		250V
C611	1-107-907-11	ELECT	22µF	20%	50V
C613	1-107-905-11	ELECT	4.7µF	20%	50V
C614	1-107-910-11	ELECT	100µF	20%	50V
C615	1-131-913-11	ELECT	150µF	20%	450V
C616	1-130-495-00	MYLAR	0.1µF	5%	50V
C618	1-131-876-91	CAPACITOR	000000000		0 0
C620	1-107-910-11	ELECT	100µF	20%	50V
C621	1-107-906-11	ELECT	10µF	20%	50V
C622	1-107-909-11	ELECT	47µF	20%	50V
C623	1-127-825-11	FILM	0.0033µF	3%	1KV
C629	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C630	1-137-479-71	MYLAR	1µF	10%	400V
C631	1-115-340-11	CERAMIC CHIP	0.22µF	10%	25V
C632	1-107-910-11	ELECT	100µF	20%	50V

Ref.No.	Part No.	Description			Remark
C637	1-107-910-11	ELECT	100µF	20%	50V
C644	1-127-825-11	FILM	0.0033µF	3%	1KV
C651	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C690	1-111-074-11	ELECT	0.0039F	20%	25V
C691	1-111-074-11	ELECT	0.0039F	20%	25V
C693	1-126-942-61	ELECT	1000µF	20%	25V
	<CONNECTOR>				
CN601	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P			
CN690	* 1-580-843-11	PIN, CONNECTOR (POWER)			
CN691		1-695-915-11 TAB (CONTACT)			
	<DIODE>				
D601	8-719-510-53	DIODE D4SB60L			
D602	8-719-304-63	DIODE RM11C			
D604	8-719-989-76	DIODE SC802-04			
D605	8-719-989-21	DIODE SC311-6-TE12RA			
D606	8-719-989-21	DIODE SC311-6-TE12RA			
D607	8-719-989-21	DIODE SC311-6-TE12RA			
D620	8-719-063-73	DIODE D1NL20U-TR			
D661	8-719-158-53	DIODE RD13SB2			
D662	8-719-063-73	DIODE D1NL20U-TR			
D663	8-719-063-73	DIODE D1NL20U-TR			
D668	8-719-063-73	DIODE D1NL20U-TR			
D669	8-719-110-67	DIODE RD27ESB2			
D690	8-719-988-30	DIODE D30SC4M			
	<FUSE>				
F601	⚠1-576-231-11	FUSE (H.B.C.) 4A/250V			
	<FUSE HOLDER>				
FH1	1-533-223-11	CLIP, FUSE			
FH2	1-533-223-11	CLIP, FUSE			
	<IC>				
IC603	8-749-013-78	IC MCR5102			
IC666	8-749-015-89	IC MZ1530			
IC690	8-749-920-44	IC SE-012N			
	<COIL>				
L601	1-406-977-21	INDUCTOR	100µH		
L690	1-469-563-11	INDUCTOR	5.6µH		
	<PHOTO COUPLER>				
PH601	8-749-010-64	PHOTO COUPLER PC123F2			
	<RESISTOR>				
R601	⚠1-220-825-11	CARBON	330K	5%	1/2W
R604	1-215-424-00	METAL	1.3K	1%	1/4W
R605	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R608	1-216-346-00	METAL OXIDE	0.56	5%	1W F
R610	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R615	1-249-413-11	CARBON	470	5%	1/4W
R621	⚠1-202-727-00	SOLID	4.7M	20%	1/2W
R622	⚠1-202-727-00	SOLID	4.7M	20%	1/2W
R644	1-215-485-00	METAL	470K	1%	1/4W
R645	1-215-481-91	METAL	330K	1%	1/4W

Ref.No.	Part No.	Description			Remark
R653	1-215-485-00	METAL	470K	1%	1/4W
R657	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R658	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R668	⚠1-242-803-11	CEMENTED	1.5	5%	7W
R669	⚠1-242-803-11	CEMENTED	1.5	5%	7W
R670	1-217-192-21	METAL	0.22	10%	2W
R671	1-217-192-21	METAL	0.22	10%	2W
R672	1-215-926-00	METAL OXIDE	33K	5%	3W F
R673	1-215-926-00	METAL OXIDE	33K	5%	3W F
R674	1-249-377-11	CARBON	0.47	5%	1/4W F
R675	1-216-073-00	RES,CHIP	10K	5%	1/10W
R677	1-216-346-00	METAL OXIDE	0.56	5%	1W F
R678	1-260-135-11	CARBON	1M	5%	1/2W
R679	1-260-135-11	CARBON	1M	5%	1/2W
R680	1-260-135-11	CARBON	1M	5%	1/2W
R681	1-260-135-11	CARBON	1M	5%	1/2W
R688	1-215-926-00	METAL OXIDE	33K	5%	3W F
R690	1-249-410-11	CARBON	270	5%	1/4W F
R691	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R692	1-216-049-91	RES,CHIP	1K	5%	1/10W
R693	1-249-401-11	CARBON	47	5%	1/4W F
	<TRANSFORMER>				
T601	⚠1-435-155-11	TRANSFORMER, LINE FILTER			
T602	1-435-154-11	TRANSFORMER, FERRITE (PFT)			
T604	1-435-153-11	TRANSFORMER, CONVERTER (PIT)			
	<VARISTOR>				
VDR602	⚠1-801-073-31	VARISTOR TNR14V471K660			

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	* A-1372-675-A	HA MOUNT (D9H5)			
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	<CAPACITOR>				
C220	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C221	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C222	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C223	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C224	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C225	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C226	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C227	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C228	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C229	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C230	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C231	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C232	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C233	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C234	1-163-031-11	CERAMIC CHIP	0.01µF		50V
	<CONNECTOR>				
CN201	1-785-728-21	PIN (PC BOARD), CONNECTOR 7P			
CN202	* 1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P			
CN203	1-779-993-11	PIN, CONNECTOR (PWB) 5P			
	<DIODE>				
D201	8-719-073-01	DIODE MA111-(K8).S0			
D202	8-719-073-01	DIODE MA111-(K8).S0			

Ref.No.	Part No.	Description			Remark
D203	8-719-073-01	DIODE MA111-(K8).S0			
D204	8-719-073-01	DIODE MA111-(K8).S0			
D205	8-719-073-01	DIODE MA111-(K8).S0			
D206	8-719-073-01	DIODE MA111-(K8).S0			
D207	8-719-073-01	DIODE MA111-(K8).S0			
D208	8-719-073-01	DIODE MA111-(K8).S0			
D209	8-719-073-01	DIODE MA111-(K8).S0			
D210	8-719-073-01	DIODE MA111-(K8).S0			
D211	8-719-073-01	DIODE MA111-(K8).S0			
D212	8-719-073-01	DIODE MA111-(K8).S0			
D213	8-719-073-01	DIODE MA111-(K8).S0			
D219	8-719-073-01	DIODE MA111-(K8).S0			
D220	8-719-073-01	DIODE MA111-(K8).S0			
D221	8-719-073-01	DIODE MA111-(K8).S0			
D222	8-719-073-01	DIODE MA111-(K8).S0			
D223	8-719-054-22	DIODE SML-020MLTT87			
D224	8-719-054-22	DIODE SML-020MLTT87			
D225	8-719-054-22	DIODE SML-020MLTT87			
D226	8-719-054-22	DIODE SML-020MLTT87			
D227	8-719-158-19	DIODE RD6.2SB			
D232	8-719-073-01	DIODE MA111-(K8).S0			
D233	8-719-073-01	DIODE MA111-(K8).S0			
D234	8-719-073-01	DIODE MA111-(K8).S0			
D235	8-719-073-01	DIODE MA111-(K8).S0			
D242	8-719-073-01	DIODE MA111-(K8).S0			
D243	8-719-073-01	DIODE MA111-(K8).S0			
D244	8-719-073-01	DIODE MA111-(K8).S0			
D245	8-719-073-01	DIODE MA111-(K8).S0			
D246	8-719-073-01	DIODE MA111-(K8).S0			
D247	8-719-073-01	DIODE MA111-(K8).S0			
	<IC>				
IC201	8-759-342-19	IC NJU3716M-T2			
IC202	8-759-342-19	IC NJU3716M-T2			
IC203	8-759-342-19	IC NJU3716M-T2			
IC204	8-759-342-19	IC NJU3716M-T2			
	<TRANSISTOR>				
Q201	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q202	8-729-921-12	TRANSISTOR 2SD1834			
Q203	8-729-921-12	TRANSISTOR 2SD1834			
Q204	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q205	8-729-921-12	TRANSISTOR 2SD1834			
Q206	8-729-921-12	TRANSISTOR 2SD1834			
	<RESISTOR>				
R201	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R202	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R203	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R204	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R205	1-216-097-91	RES,CHIP	100K	5%	1/10W
R206	1-216-049-91	RES,CHIP	1K	5%	1/10W
R207	1-216-049-91	RES,CHIP	1K	5%	1/10W
R208	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R209	1-216-049-91	RES,CHIP	1K	5%	1/10W
R210	1-216-097-91	RES,CHIP	100K	5%	1/10W
R211	1-216-085-00	RES,CHIP	33K	5%	1/10W
R212	1-216-095-00	RES,CHIP	82K	5%	1/10W
R213	1-216-085-00	RES,CHIP	33K	5%	1/10W
R214	1-216-095-00	RES,CHIP	82K	5%	1/10W
R215	1-216-089-91	RES,CHIP	47K	5%	1/10W
R216	1-216-089-91	RES,CHIP	47K	5%	1/10W
R217	1-216-089-91	RES,CHIP	47K	5%	1/10W

Ref.No.	Part No.	Description			Remark
R218	1-216-089-91	RES,CHIP	47K	5%	1/10W
R219	1-216-089-91	RES,CHIP	47K	5%	1/10W
R220	1-216-089-91	RES,CHIP	47K	5%	1/10W
R221	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R222	1-216-049-91	RES,CHIP	1K	5%	1/10W
R223	1-216-049-91	RES,CHIP	1K	5%	1/10W
R224	1-216-049-91	RES,CHIP	1K	5%	1/10W
R225	1-216-097-91	RES,CHIP	100K	5%	1/10W
R226	1-216-035-00	RES,CHIP	270	5%	1/10W
R227	1-216-035-00	RES,CHIP	270	5%	1/10W
R228	1-216-095-00	RES,CHIP	82K	5%	1/10W
R229	1-216-095-00	RES,CHIP	82K	5%	1/10W
R230	1-216-035-00	RES,CHIP	270	5%	1/10W
R231	1-216-035-00	RES,CHIP	270	5%	1/10W
R232	1-216-085-00	RES,CHIP	33K	5%	1/10W
R233	1-216-085-00	RES,CHIP	33K	5%	1/10W
R234	1-216-097-91	RES,CHIP	100K	5%	1/10W
R235	1-216-035-00	RES,CHIP	270	5%	1/10W
R236	1-216-035-00	RES,CHIP	270	5%	1/10W
R237	1-216-035-00	RES,CHIP	270	5%	1/10W
R238	1-216-035-00	RES,CHIP	270	5%	1/10W
R239	1-216-035-00	RES,CHIP	270	5%	1/10W
R240	1-216-035-00	RES,CHIP	270	5%	1/10W
	<SWITCH>				
S201	1-692-037-31	SWITCH, KEY BOARD (POWER)			
S202	1-692-037-31	SWITCH, KEY BOARD (DEGAUSS)			
S203	1-692-037-31	SWITCH, KEY BOARD (NUM-1)			
S204	1-692-037-31	SWITCH, KEY BOARD (NUM-2)			
S205	1-692-037-31	SWITCH, KEY BOARD (NUM-3)			
S206	1-692-037-31	SWITCH, KEY BOARD ((DEL)			
S207	1-692-037-31	SWITCH, KEY BOARD (NUM-4)			
S208	1-692-037-31	SWITCH, KEY BOARD (NUM-5)			
S209	1-692-037-31	SWITCH, KEY BOARD (NUM-6)			
S210	1-692-037-31	SWITCH, KEY BOARD (NUM-0)			
S211	1-692-037-31	SWITCH, KEY BOARD (NUM-7)			
S212	1-692-037-31	SWITCH, KEY BOARD (NUM-8)			
S213	1-692-037-31	SWITCH, KEY BOARD (NUM-9)			
S214	1-692-037-31	SWITCH, KEY BOARD (MENU)			
S215	1-692-037-31	SWITCH, KEY BOARD (ENTER)			
S216	1-62-037-31	SWITCH, KEY BOARD (UP)			
S217	1-692-037-31	SWITCH, KEY BOARD (DOWN)			
S218	1-771-804-11	SWITCH, TACTILE (COMB			
S219	1-771-804-11	SWITCH, TACTILE (F1)			
S220	1-771-804-11	SWITCH, TACTILE (F2)			
S221	1-771-804-11	SWITCH, TACTILE (ADDRESS)			
S222	1-771-804-11	SWITCH, TACTILE (SHIFT)			
S223	1-771-804-11	SWITCH, TACTILE (U/S)			
S224	1-771-804-11	SWITCH, TACTILE (H DLAY)			
S225	1-771-804-11	SWITCH, TACTILE (V DLAY)			
S226	1-771-804-11	SWITCH, TACTILE (MONO)			
S227	1-771-804-11	SWITCH, TACTILE (APT)SW			

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* A-1372-676-A HB MOUNT (D9H5)
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<CAPACITOR>

C1200	1-163-031-11	CERAMIC CHIP	0.01µF	50V
C1201	1-163-031-11	CERAMIC CHIP	0.01µF	50V
C1202	1-163-031-11	CERAMIC CHIP	0.01µF	50V
C1203	1-163-031-11	CERAMIC CHIP	0.01µF	50V
C1204	1-163-031-11	CERAMIC CHIP	0.01µF	50V

Ref.No.	Part No.	Description			Remark
C1205	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C1206	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C1207	1-163-031-11	CERAMIC CHIP 0.01µF			50V
	<CONNECTOR>				
CN1200	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN1201	* 1-564-726-11	PIN, CONNECTOR (SMALL TYPE)10P			
CN1203	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
	<DIODE>				
D1200	8-719-158-19	DIODE RD6.2SB			
D1201	8-719-073-01	DIODE MA111-(K8).S0			
D1202	8-719-073-01	DIODE MA111-(K8).S0			
D1203	8-719-073-01	DIODE MA111-(K8).S0			
D1204	8-719-073-01	DIODE MA111-(K8).S0			
	<CHIP CONDUCTOR>				
JR1200	1-216-295-91	SHORT	0		
	<RESISTOR>				
R1200	1-216-081-00	RES,CHIP	22K	5%	1/10W
R1201	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1202	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1203	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1204	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1205	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1206	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1207	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1208	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
	<VARIABLE RESISTOR>				
RV1200	1-223-504-21	RES, VAR, CARBON 20K			
	<SWITCH>				
S1200	1-418-651-11	ENCODER, ROTARY (PHASE)			
S1201	1-418-651-11	ENCODER, ROTARY (CHROMA)			
S1202	1-418-651-11	ENCODER, ROTARY (BRIGHT)			
S1203	1-418-651-11	ENCODER, ROTARY (CONTRAST)SW			
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	* A-1375-186-A	HC COMPL (D9H5)			
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	1-540-044-11	SOCKET, IC			
	4-382-854-01	SCREW(M3X8), P, SW (+)			
	<CAPACITOR>				
C1	1-163-227-11	CERAMIC CHIP 10PF		0.5PF	50V
C2	1-163-227-11	CERAMIC CHIP 10PF		0.5PF	50V
C4	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C50	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C52	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C53	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C54	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C55	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C56	1-126-941-11	ELECT	470µF	20%	25V
C57	1-126-786-11	ELECT	47µF	20%	16V

Ref.No.	Part No.	Description			Remark
C60	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C61	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C62	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C63	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C64	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C65	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C67	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C68	1-163-031-11	CERAMIC CHIP 0.01µF			50V
C81	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C82	1-124-635-00	ELECT	220µF	20%	6.3V
C83	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C84	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C85	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C86	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C87	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C89	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
	<CONNECTOR>				
CN2	* 1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P			
CN3	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE)10P			
CN4	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN5	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN6	* 1-564-508-11	PLUG, CONNECTOR 5P			
	<DIODE>				
D1	8-719-158-19	DIODE RD6.2SB			
D2	8-719-158-19	DIODE RD6.2SB			
D3	8-719-158-19	DIODE RD6.2SB			
D4	8-719-158-19	DIODE RD6.2SB			
D5	8-719-158-19	DIODE RD6.2SB			
D6	8-719-158-19	DIODE RD6.2SB			
D7	8-719-158-19	DIODE RD6.2SB			
D8	8-719-158-19	DIODE RD6.2SB			
	<FILTER>				
FL1	1-239-183-11	FILTER, EMI			
FL2	1-239-183-11	FILTER, EMI			
FL3	1-239-183-11	FILTER, EMI			
FL4	1-239-183-11	FILTER, EMI			
FL5	1-236-071-11	ENCAPSULATED COMPONENT			
FL6	1-236-071-11	ENCAPSULATED COMPONENT			
FL7	1-239-183-11	FILTER, EMI			
FL8	1-239-183-11	FILTER, EMI			
FL9	1-239-183-11	FILTER, EMI			
FL10	1-239-183-11	FILTER, EMI			
FL11	1-236-071-11	ENCAPSULATED COMPONENT			
FL12	1-239-183-11	FILTER, EMI			
FL13	1-239-183-11	FILTER, EMI			
FL14	1-239-183-11	FILTER, EMI			
FL15	1-239-183-11	FILTER, EMI			
FL16	1-236-071-11	ENCAPSULATED COMPONENT			
	<IC>				
IC2	8-759-991-19	IC PST529CMT			
IC3	8-759-186-47	IC TC74VHC138F			
IC9	8-759-186-30	IC TC74VHC14F			
IC10	8-759-186-30	IC TC74VHC14F			
IC11	8-759-175-27	IC TC74VHC574F			
IC12	8-759-174-16	IC TC74VHC244F			
IC13	8-759-289-43	IC LTC490CS8			
IC14	8-759-394-36	IC BA09T			

Ref.No.	Part No.	Description			Remark
	<COIL>				
L2	1-412-537-31	INDUCTOR	100µH		
L4	1-412-544-15	INDUCTOR	390µH		
	<RESISTOR>				
R1	1-216-073-00	RES,CHIP	10K	5%	1/10W
R2	1-216-295-91	SHORT	0		
R3	1-216-073-00	RES,CHIP	10K	5%	1/10W
R4	1-216-073-00	RES,CHIP	10K	5%	1/10W
R5	1-216-073-00	RES,CHIP	10K	5%	1/10W
R6	1-216-073-00	RES,CHIP	10K	5%	1/10W
R7	1-216-097-91	RES,CHIP	100K	5%	1/10W
R12	1-216-073-00	RES,CHIP	10K	5%	1/10W
R13	1-216-073-00	RES,CHIP	10K	5%	1/10W
R14	1-216-049-91	RES,CHIP	1K	5%	1/10W
R15	1-216-049-91	RES,CHIP	1K	5%	1/10W
R16	1-216-073-00	RES,CHIP	10K	5%	1/10W
R19	1-216-073-00	RES,CHIP	10K	5%	1/10W
R20	1-216-073-00	RES,CHIP	10K	5%	1/10W
R21	1-216-049-91	RES,CHIP	1K	5%	1/10W
R22	1-216-049-91	RES,CHIP	1K	5%	1/10W
R23	1-216-049-91	RES,CHIP	1K	5%	1/10W
R24	1-216-049-91	RES,CHIP	1K	5%	1/10W
R25	1-216-049-91	RES,CHIP	1K	5%	1/10W
R26	1-216-049-91	RES,CHIP	1K	5%	1/10W
R27	1-216-049-91	RES,CHIP	1K	5%	1/10W
R28	1-216-049-91	RES,CHIP	1K	5%	1/10W
R41	1-216-073-00	RES,CHIP	10K	5%	1/10W
R42	1-216-073-00	RES,CHIP	10K	5%	1/10W
R43	1-216-073-00	RES,CHIP	10K	5%	1/10W
R44	1-216-073-00	RES,CHIP	10K	5%	1/10W
R60	1-216-089-91	RES,CHIP	47K	5%	1/10W
R61	1-216-089-91	RES,CHIP	47K	5%	1/10W
R62	1-216-089-91	RES,CHIP	47K	5%	1/10W
R63	1-216-089-91	RES,CHIP	47K	5%	1/10W
R64	1-216-089-91	RES,CHIP	47K	5%	1/10W
R65	1-216-089-91	RES,CHIP	47K	5%	1/10W
R66	1-216-089-91	RES,CHIP	47K	5%	1/10W
R67	1-216-089-91	RES,CHIP	47K	5%	1/10W
R68	1-216-097-91	RES,CHIP	100K	5%	1/10W
R70	1-216-097-91	RES,CHIP	100K	5%	1/10W
R71	1-216-097-91	RES,CHIP	100K	5%	1/10W
R72	1-216-097-91	RES,CHIP	100K	5%	1/10W
R73	1-216-097-91	RES,CHIP	100K	5%	1/10W
R74	1-216-097-91	RES,CHIP	100K	5%	1/10W
R75	1-216-097-91	RES,CHIP	100K	5%	1/10W
R76	1-216-097-91	RES,CHIP	100K	5%	1/10W
R77	1-216-097-91	RES,CHIP	100K	5%	1/10W
R78	1-216-097-91	RES,CHIP	100K	5%	1/10W
R79	1-216-097-91	RES,CHIP	100K	5%	1/10W
R80	1-216-097-91	RES,CHIP	100K	5%	1/10W
R81	1-216-097-91	RES,CHIP	100K	5%	1/10W
R82	1-216-097-91	RES,CHIP	100K	5%	1/10W
R83	1-216-097-91	RES,CHIP	100K	5%	1/10W
R84	1-216-097-91	RES,CHIP	100K	5%	1/10W
R85	1-216-097-91	RES,CHIP	100K	5%	1/10W
R86	1-216-097-91	RES,CHIP	100K	5%	1/10W
R87	1-216-097-91	RES,CHIP	100K	5%	1/10W
R88	1-216-097-91	RES,CHIP	100K	5%	1/10W
R89	1-216-097-91	RES,CHIP	100K	5%	1/10W
R90	1-216-097-91	RES,CHIP	100K	5%	1/10W
R91	1-216-097-91	RES,CHIP	100K	5%	1/10W
R92	1-216-097-91	RES,CHIP	100K	5%	1/10W
R93	1-216-097-91	RES,CHIP	100K	5%	1/10W
R94	1-216-097-91	RES,CHIP	100K	5%	1/10W

Ref.No.	Part No.	Description			Remark
	<CRYSTAL>				
X1	1-767-892-21	VIBRATOR, CRYSTAL (20 MHz)			
**********					
	* A-1372-677-A	HD MOUNT (D9H5)			
		**********			
	<CAPACITOR>				
C3200	1-126-791-11	ELECT	10µF	20%	16V
C3201	1-126-791-11	ELECT	10µF	20%	16V
C3202	1-126-791-11	ELECT	10µF	20%	16V
C3203	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3204	1-126-786-11	ELECT	47µF	20%	16V
C3205	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3206	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3207	1-126-786-11	ELECT	47µF	20%	16V
C3209	1-126-791-11	ELECT	10µF	20%	16V
C3210	1-115-868-11	ELECT	0.22µF	20%	50V
C3211	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C3212	1-126-791-11	ELECT	10µF	20%	16V
C3213	1-126-791-11	ELECT	10µF	20%	16V
C3214	1-137-397-11	MYLAR	0.047µF	5%	100V
C3215	1-128-499-11	ELECT	220µF	20%	16V
C3216	1-126-786-11	ELECT	47µF	20%	16V
C3217	1-128-499-11	ELECT	220µF	20%	16V
C3218	1-126-791-11	ELECT	10µF	20%	16V
C3219	1-163-031-11	CERAMIC CHIP	0.01µF		50V
	<CONNECTOR>				
CN3200	* 1-564-518-11	PLUG, CONNECTOR 3P			
CN3202	* 1-564-517-11	PLUG, CONNECTOR 2P			
CN3203	* 1-564-526-11	PLUG, CONNECTOR 11P			
	<FERRITE BEAD>				
FB3200	1-410-396-41	FERRITE	0.45µH		
	<FILTER>				
FL3200	1-239-384-11	FILTER, EMI			
FL3201	1-239-384-11	FILTER, EMI			
FL3202	1-239-384-11	FILTER, EMI			
	<IC>				
IC3200	8-759-009-06	IC MC14052BF			
IC3201	8-759-420-04	IC AN5265			
	<JACK>				
J3200	1-793-632-11	JACK, PIN (LINE A)			
J3201	1-793-632-11	JACK, PIN (LINE B)			
J3202	1-793-632-11	JACK, PIN (LINE C)			
	<JACKCHIP CONDUCTOR>				
JR3201	1-216-295-91	SHORT	0		
	<TRANSISTOR>				
Q3200	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR			
Q3201	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR			

Ref.No.	Part No.	Description			Remark
Q3202	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR			
Q3203	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q3205	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q3206	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q3207	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
	<RESISTOR>				
R3200	1-249-440-11	CARBON	82K	5%	1/4W
R3201	1-249-440-11	CARBON	82K	5%	1/4W
R3202	1-249-440-11	CARBON	82K	5%	1/4W
R3203	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3204	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3205	1-216-097-91	RES,CHIP	100K	5%	1/10W
R3206	1-216-105-91	RES,CHIP	220K	5%	1/10W
R3207	1-216-115-00	RES,CHIP	560K	5%	1/10W
R3208	1-216-105-91	RES,CHIP	220K	5%	1/10W
R3209	1-216-115-00	RES,CHIP	560K	5%	1/10W
R3210	1-216-105-91	RES,CHIP	220K	5%	1/10W
R3211	1-216-115-00	RES,CHIP	560K	5%	1/10W
R3212	1-216-077-91	RES,CHIP	15K	5%	1/10W
R3213	1-216-077-91	RES,CHIP	15K	5%	1/10W
R3214	1-216-077-91	RES,CHIP	15K	5%	1/10W
R3215	1-216-025-91	RES,CHIP	100	5%	1/10W
R3216	1-216-025-91	RES,CHIP	100	5%	1/10W
R3217	1-216-025-91	RES,CHIP	100	5%	1/10W
R3218	1-216-025-91	RES,CHIP	100	5%	1/10W
R3219	1-216-025-91	RES,CHIP	100	5%	1/10W
R3220	1-216-025-91	RES,CHIP	100	5%	1/10W
R3221	1-216-077-91	RES,CHIP	15K	5%	1/10W
R3222	1-216-025-91	RES,CHIP	100	5%	1/10W
R3226	1-216-091-00	RES,CHIP	56K	5%	1/10W
R3228	1-249-389-11	CARBON	4.7	5%	1/4W
R3229	1-249-424-11	CARBON	3.9K	5%	1/4W
R3230	1-249-415-11	CARBON	680	5%	1/4W
R3231	1-216-085-00	RES,CHIP	33K	5%	1/10W
R3232	1-216-081-00	RES,CHIP	22K	5%	1/10W
R3233	1-249-393-11	CARBON	10	5%	1/4W F
R3234	1-249-389-11	CARBON	4.7	5%	1/4W F
R3235	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3236	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3237	1-216-081-00	RES,CHIP	22K	5%	1/10W
R3238	1-216-077-91	RES,CHIP	15K	5%	1/10W
R3239	1-216-025-91	RES,CHIP	100	5%	1/10W

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* A-1306-574-A	MA COMPL (D9H1)	
	**********	
* A-1306-581-A	MA COMPL (D9H5)	
	**********	
1-540-222-11	SOCKET, IC (PCC PACKAGE) 84P	
1-550-104-11	HOLDER, BATTERY	
————	BATTERY, LITHIUM CR2025	

<CAPACITOR>

C101	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C102	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C103	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C104	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C105	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C106	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C108	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C109	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C110	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C111	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C112	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C113	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C114	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C115	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C116	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C117	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C118	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C119	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C120	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C121	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C122	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C123	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C124	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C125	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C126	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C127	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C128	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C129	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C130	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C131	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C132	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C133	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C134	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C135	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C136	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C137	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C139	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C140	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C141	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C142	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C144	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C145	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C147	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C148	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C149	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C150	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C151	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C153	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C154	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C159	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C160	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C161	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C162	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C163	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C164	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C165	1-126-400-11	ELECT CHIP	22µF	20%	35V
C166	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C168	1-126-392-11	ELECT CHIP	100µF	20%	6.3V
C169	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C171	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C172	1-126-392-11	ELECT CHIP	100µF	20%	6.3V

<CONNECTOR>

CN101	* 1-564-525-11	PLUG, CONNECTOR 10P
CN102	* 1-793-722-11	PIN, CONNECTOR (PC BOARD) 50P
CN103	* 1-564-522-11	PLUG, CONNECTOR 7P
CN104	* 1-564-526-11	PLUG, CONNECTOR 11P (D9H5)
CN105	* 1-564-524-11	PLUG, CONNECTOR 9P (D9H5)

<DIODE>

D101	8-719-158-19	DIODE RD6.2SB
D102	8-719-158-19	DIODE RD6.2SB

Ref.No.	Part No.	Description			Remark
D103	8-719-158-19	DIODE RD6.2SB			
D104	8-719-158-19	DIODE RD6.2SB			
D105	8-719-158-19	DIODE RD6.2SB (D9H5)			
D107	8-719-158-19	DIODE RD6.2SB (D9H5)			
D109	8-719-158-19	DIODE RD6.2SB			
	<FILTER>				
FL103	1-239-183-11	FILTER, EMI			
FL104	1-239-183-11	FILTER, EMI			
FL105	1-239-183-11	FILTER, EMI			
FL107	1-239-183-11	FILTER, EMI			
FL108	1-239-183-11	FILTER, EMI			
FL109	1-239-183-11	FILTER, EMI			
FL110	1-239-183-11	FILTER, EMI			
FL111	1-239-183-11	FILTER, EMI			
FL112	1-239-183-11	FILTER, EMI			
FL113	1-239-183-11	FILTER, EMI			
FL114	1-236-071-11	ENCAPSULATED COMPONENT			
FL115	1-236-071-11	ENCAPSULATED COMPONENT			
FL116	1-239-183-11	FILTER, EMI (D9H5)			
FL117	1-236-071-11	ENCAPSULATED COMPONENT			
FL118	1-239-183-11	FILTER, EMI (D9H5)			
FL120	1-239-183-11	FILTER, EMI			
FL121	1-239-183-11	FILTER, EMI (D9H5)			
FL123	1-239-183-11	FILTER, EMI			
	<IC>				
IC101	8-759-186-44	IC TC74VHC125F			
IC102	8-759-082-59	IC TC7W32FU			
IC103	8-759-925-75	IC SN74HC05ANS			
IC104	8-759-239-98	IC TC74HC30AF			
IC106	8-759-644-13	IC HD6435368AX06M			
IC107	8-759-081-44	IC TC74VHC04F			
IC108	8-759-553-93	IC MBM29F400BC-90PF			
IC109	8-759-186-47	IC TC74VHC138F			
IC110	8-759-346-07	IC MM1026BFB			
IC111	8-759-497-29	IC LC35256DM-70-TLM			
IC113	8-759-575-91	IC MAX490ECSA			
	<CHIP CONDUCTOR>				
JR101	1-216-295-91	SHORT	0		
JR103	1-216-097-91	RES,CHIP	100K	5%	1/10W
	<COIL>				
L101	1-412-537-31	INDUCTOR	100µH		
	<TRANSISTOR>				
Q102	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q103	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q104	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q105	8-729-903-46	TRANSISTOR 2SB1132-P			
Q106	8-729-903-46	TRANSISTOR 2SB1132-P			
	<RESISTOR>				
R101	1-216-097-91	RES,CHIP	100K	5%	1/10W
R102	1-216-097-91	RES,CHIP	100K	5%	1/10W
R103	1-216-025-91	RES,CHIP	100	5%	1/10W
R104	1-216-025-91	RES,CHIP	100	5%	1/10W
R105	1-216-097-91	RES,CHIP	100K	5%	1/10W
R106	1-216-097-91	RES,CHIP	100K	5%	1/10W
R107	1-216-097-91	RES,CHIP	100K	5%	1/10W
R108	1-216-097-91	RES,CHIP	100K	5%	1/10W
R109	1-216-097-91	RES,CHIP	100K	5%	1/10W
R110	1-216-097-91	RES,CHIP	100K	5%	1/10W
R111	1-216-097-91	RES,CHIP	100K	5%	1/10W
R112	1-216-097-91	RES,CHIP	100K	5%	1/10W
R113	1-216-025-91	RES,CHIP	100	5%	1/10W
R114	1-216-295-91	SHORT	0 (D9H5)		
R115	1-216-025-91	RES,CHIP	100	5%	1/10W
R116	1-216-025-91	RES,CHIP	100	5%	1/10W
R117	1-216-025-91	RES,CHIP	100	5%	1/10W
R118	1-216-097-91	RES,CHIP	100K	5%	1/10W
R119	1-216-097-91	RES,CHIP	100K	5%	1/10W
R120	1-216-025-91	RES,CHIP	100	5%	1/10W
R121	1-216-097-91	RES,CHIP	100K	5%	1/10W
R122	1-216-025-91	RES,CHIP	100	5%	1/10W
R123	1-216-121-91	RES,CHIP	1M	5%	1/10W
R124	1-216-025-91	RES,CHIP	100	5%	1/10W
R125	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R126	1-216-025-91	RES,CHIP	100	5%	1/10W
R127	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R128	1-216-097-91	RES,CHIP	100K	5%	1/10W
R129	1-216-097-91	RES,CHIP	100K	5%	1/10W
R130	1-216-049-91	RES,CHIP	1K	5%	1/10W
R131	1-216-049-91	RES,CHIP	1K	5%	1/10W
R132	1-216-097-91	RES,CHIP	100K	5%	1/10W
R133	1-216-049-91	RES,CHIP	1K	5%	1/10W
R134	1-216-049-91	RES,CHIP	1K	5%	1/10W
R135	1-216-073-00	RES,CHIP	10K	5%	1/10W
R136	1-216-073-00	RES,CHIP	10K	5%	1/10W
R137	1-216-073-00	RES,CHIP	10K	5%	1/10W
R138	1-216-097-91	RES,CHIP	100K	5%	1/10W
R139	1-216-049-91	RES,CHIP	1K	5%	1/10W
R140	1-216-097-91	RES,CHIP	100K	5%	1/10W
R141	1-216-049-91	RES,CHIP	1K	5%	1/10W
R142	1-216-097-91	RES,CHIP	100K	5%	1/10W
R143	1-216-049-91	RES,CHIP	1K	5%	1/10W
R144	1-216-097-91	RES,CHIP	100K	5%	1/10W
R145	1-216-049-91	RES,CHIP	1K	5%	1/10W
R146	1-216-097-91	RES,CHIP	100K	5%	1/10W
R147	1-216-049-91	RES,CHIP	1K	5%	1/10W
R148	1-216-097-91	RES,CHIP	100K	5%	1/10W
R150	1-216-097-91	RES,CHIP	100K	5%	1/10W
R151	1-216-097-91	RES,CHIP	100K	5%	1/10W
R152	1-216-073-00	RES,CHIP	10K	5%	1/10W
R153	1-216-073-00	RES,CHIP	10K	5%	1/10W
R154	1-216-097-91	RES,CHIP	100K	5%	1/10W
R155	1-216-097-91	RES,CHIP	100K	5%	1/10W
R156	1-216-097-91	RES,CHIP	100K	5%	1/10W
R157	1-216-097-91	RES,CHIP	100K	5%	1/10W
R158	1-216-073-00	RES,CHIP	10K	5%	1/10W
R159	1-216-049-91	RES,CHIP	1K	5%	1/10W
R160	1-216-073-00	RES,CHIP	10K	5%	1/10W
R161	1-216-097-91	RES,CHIP	100K	5%	1/10W
R162	1-216-097-91	RES,CHIP	100K	5%	1/10W
R163	1-216-097-91	RES,CHIP	100K	5%	1/10W
R164	1-216-097-91	RES,CHIP	100K	5%	1/10W
R165	1-216-097-91	RES,CHIP	100K	5%	1/10W
R166	1-216-025-91	RES,CHIP	100	5%	1/10W
R167	1-216-097-91	RES,CHIP	100K	5%	1/10W
R168	1-216-025-91	RES,CHIP	100	5%	1/10W
R169	1-216-097-91	RES,CHIP	100K	5%	1/10W
R170	1-216-025-91	RES,CHIP	100	5%	1/10W
R171	1-216-025-91	RES,CHIP	100	5%	1/10W

Ref.No.	Part No.	Description			Remark
R173	1-216-025-91	RES,CHIP	100	5%	1/10W
R174	1-216-025-91	RES,CHIP	100	5%	1/10W
R177	1-216-025-91	RES,CHIP	100	5%	1/10W
R178	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R179	1-216-047-91	RES,CHIP	820	5%	1/10W
R180	1-216-073-00	RES,CHIP	10K	5%	1/10W
R181	1-216-025-91	RES,CHIP	100	5%	1/10W
R182	1-216-025-91	RES,CHIP	100	5%	1/10W
R183	1-216-073-00	RES,CHIP	10K	5%	1/10W
R184	1-216-025-91	RES,CHIP	100	5%	1/10W
R185	1-216-025-91	RES,CHIP	100	5%	1/10W
R186	1-216-025-91	RES,CHIP	100	5%	1/10W
R187	1-216-025-91	RES,CHIP	100	5%	1/10W
R188	1-216-025-91	RES,CHIP	100	5%	1/10W
R189	1-216-025-91	RES,CHIP	100	5%	1/10W
R190	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R191	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R192	1-216-097-91	RES,CHIP	100K	5%	1/10W
R193	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R194	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R195	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R196	1-216-073-00	RES,CHIP	10K	5%	1/10W
R197	1-216-073-00	RES,CHIP	10K	5%	1/10W
R198	1-216-097-91	RES,CHIP	100K	5%	1/10W
	<THERMISTOR>				
THP101	1-771-075-21	THERMISTOR, POSITIVE			
THP102	1-771-075-21	THERMISTOR, POSITIVE			
	<TEST PIN>				
TP110	* 1-537-864-11	PIN, POST			
TP111	* 1-537-864-11	PIN, POST			
TP112	* 1-537-864-11	PIN, POST			
TP113	* 1-537-864-11	PIN, POST			
TP114	* 1-537-864-11	PIN, POST			
	<CRYSTAL>				
X101	1-767-892-21	VIBRATOR, CRYSTAL (20 MHz)			

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	* A-1306-575-A	MB COMPL (D9H1) **********			
	* A-1306-576-A	MB COMPL (D9H5) **********			
	7-432-114-11	SCREW LOCK			
	<CAPACITOR>				
C1100	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1101	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1102	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1103	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1104	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1105	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1106	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1107	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1108	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C1109	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1110	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C1111	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1112	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1114	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1115	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1116	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1117	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1118	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C1119	1-107-682-11	CERAMIC CHIP	1µF	10%	16V
C1120	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1121	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1122	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1123	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1124	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1125	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1126	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1127	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1128	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1129	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1130	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1131	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1132	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1133	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1134	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1135	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C1136	1-107-682-11	CERAMIC CHIP	1µF	10%	16V
C1137	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1138	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1139	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1140	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C1141	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1142	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1143	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1144	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1145	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1146	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1147	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1148	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1149	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1150	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1151	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1152	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1153	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1154	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1156	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1157	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1158	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1159	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C1160	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C1161	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C1162	1-164-690-91	CERAMIC CHIP	0.0022µF	5%	50V
C1180	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
	<CONNECTOR>				
CN1100	* 1-564-524-11	PLUG, CONNECTOR 9P			
CN1101	* 1-564-527-11	PLUG, CONNECTOR 12P			
CN1102	* 1-793-722-11	PIN, CONNECTOR (PC BOARD) 50P			
CN1103	1-695-581-21	CONNECTOR, D SUB			
CN1104	1-695-581-21	CONNECTOR, D SUB			
CN1105	* 1-564-524-11	PLUG, CONNECTOR 9P			
CN1106	* 1-564-522-11	PLUG, CONNECTOR 7P			
CN1107	1-695-581-21	CONNECTOR, D SUB			
CN1109	1-793-721-11	JACK, MODULAR			
	<DIODE>				
D1100	8-719-158-19	DIODE RD6.2SB			
D1101	8-719-158-19	DIODE RD6.2SB			
D1102	8-719-158-19	DIODE RD6.2SB			

Ref.No.	Part No.	Description			Remark
D1103	8-719-158-19	DIODE RD6.2SB			
D1104	8-719-037-22	DIODE RD12SB-T1			
D1105	8-719-037-22	DIODE RD12SB-T1			
D1106	8-719-037-22	DIODE RD12SB-T1			
D1107	8-719-037-22	DIODE RD12SB-T1			
D1108	8-719-037-22	DIODE RD12SB-T1			
D1109	8-719-037-22	DIODE RD12SB-T1			
D1110	8-719-158-19	DIODE RD6.2SB			
D1111	8-719-158-19	DIODE RD6.2SB			
D1112	8-719-158-19	DIODE RD6.2SB			
D1113	8-719-158-19K	DIODE RD6.2SB			
D1114	8-719-158-19	DIODE RD6.2SB			
D1115	8-719-158-19	DIODE RD6.2SB			
D1116	8-719-158-19	DIODE RD6.2SB			
D1117	8-719-158-19	DIODE RD6.2SB			
D1118	8-719-158-19	DIODE RD6.2SB			
	<FILTER>				
FL1100	1-239-183-11	FILTER, EMI			
FL1101	1-239-183-11	FILTER, EMI			
FL1102	1-239-183-11	FILTER, EMI			
FL1103	1-239-183-11	FILTER, EMI			
FL1108	1-239-183-11	FILTER, EMI			
FL1109	1-239-183-11	FILTER, EMI			
FL1110	1-239-183-11	FILTER, EMI			
FL1111	1-239-183-11	FILTER, EMI			
FL1112	1-239-183-11	FILTER, EMI			
FL1113	1-239-183-11	FILTER, EMI			
FL1114	1-239-183-11	FILTER, EMI			
FL1115	1-239-183-11	FILTER, EMI			
FL1116	1-239-183-11	FILTER, EMI			
FL1117	1-239-183-11	FILTER, EMI			
FL1118	1-239-183-11	FILTER, EMI			
FL1119	1-239-183-11	FILTER, EMI			
FL1120	1-239-183-11	FILTER, EMI			
FL1121	1-239-183-11	FILTER, EMI			
	<IC>				
IC1100	8-759-186-26	IC TC74VHC02F			
IC1101	8-759-186-44	IC TC74VHC125F			
IC1102	8-759-081-44	IC TC74VHC04F			
IC1103	8-759-397-01	IC MAX487CSA-TE2			
IC1104	8-759-186-30	IC TC74VHC14F			
IC1105	8-759-594-45	IC MAX3100CEE-TG068			
IC1106	8-759-397-01	IC MAX487CSA-TE2			
IC1107	8-759-522-14	IC MB90096PF-G-127-BND-ER			
IC1108	8-759-594-45	IC MAX3100CEE-TG068			
IC1109	8-759-252-59	IC MAX202CSE			
IC1110	8-759-594-46	IC MB90096PF-178			
IC1112	8-759-454-11	IC MC74HC589AFEL			
	<COIL>				
L1100	1-412-537-31	INDUCTOR	100µH		
L1101	1-412-537-31	INDUCTOR	100µH		
L1102	1-412-537-31	INDUCTOR	100µH		
	<RESISTOR>				
R1100	1-216-025-91	RES,CHIP	100	5%	1/10W
R1101	1-216-025-91	RES,CHIP	100	5%	1/10W
R1102	1-216-025-91	RES,CHIP	100	5%	1/10W
R1103	1-216-025-91	RES,CHIP	100	5%	1/10W
R1104	1-216-025-91	RES,CHIP	100	5%	1/10W
R1106	1-216-025-91	RES,CHIP	100	5%	1/10W
R1107	1-216-025-91	RES,CHIP	100	5%	1/10W
R1108	1-216-025-91	RES,CHIP	100	5%	1/10W
R1109	1-216-025-91	RES,CHIP	100	5%	1/10W
R1110	1-216-025-91	RES,CHIP	100	5%	1/10W
R1111	1-216-025-91	RES,CHIP	100	5%	1/10W
R1112	1-216-025-91	RES,CHIP	100	5%	1/10W
R1113	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1114	1-216-025-91	RES,CHIP	100	5%	1/10W
R1115	1-216-025-91	RES,CHIP	100	5%	1/10W
R1117	1-216-121-91	RES,CHIP	1M	5%	1/10W
R1118	1-216-077-91	RES,CHIP	15K	5%	1/10W
R1119	1-216-025-91	RES,CHIP	100	5%	1/10W
R1120	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1121	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1122	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1123	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1125	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1126	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1127	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1128	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1130	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1131	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1132	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1133	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1136	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1137	1-216-295-91	SHORT	0		
R1138	1-216-625-11	METAL CHIP	82	0.50%	1/10W
R1140	1-216-638-11	METAL CHIP	300	0.50%	1/10W
R1141	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1142	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1143	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1144	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1145	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1147	1-216-295-91	SHORT	0		
R1148	1-216-625-11	METAL CHIP	82	0.50%	1/10W
R1149	1-216-638-11	METAL CHIP	300	0.50%	1/10W
R1151	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1152	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1153	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1154	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1155	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1156	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1157	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1158	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1159	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1160	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1161	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1162	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1163	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1164	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1165	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1166	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1167	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1170	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1171	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1172	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1173	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1174	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1175	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1176	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1177	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1180	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1181	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1182	1-216-049-91	RES,CHIP	1K	5%	1/10W

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Ref.No.	Part No.	Description			Remark
R1183	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1184	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1185	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1186	1-216-295-91	SHORT	0 (D9H5)		
R1187	1-216-295-91	SHORT	0 (D9H5)		
R1188	1-216-295-91	SHORT	0 (D9H5)		
R1189	1-216-295-91	SHORT	0 (D9H5)		
		<RELAY>			
RY1101	1-515-716-11	RELAY (TQ2-5V) (D9H1)			
RY1102	1-515-716-11	RELAY (TQ2-5V) (D9H1)			
		<SWITCH>			
S1101	1-771-815-11	SWITCH, LEVER			
S1102	1-762-712-11	SWITCH, SLIDE (D9H1)			
		<THERMISTOR>			
TH1100	1-533-817-21	THERMISTOR			
		<TEST PIN>			
TP1100	* 1-537-864-11	PIN, POST			
TP1101	* 1-537-864-11	PIN, POST			
TP1102	* 1-537-864-11	PIN, POST			
TP1103	* 1-537-864-11	PIN, POST			
TP1104	* 1-537-864-11	PIN, POST			
TP1106	* 1-537-864-11	PIN, POST			
TP1107	* 1-537-864-11	PIN, POST			
TP1108	* 1-537-864-11	PIN, POST			
TP1109	* 1-537-864-11	PIN, POST			
TP1110	* 1-537-864-11	PIN, POST			
TP1111	* 1-537-864-11	PIN, POST			
TP1112	* 1-537-864-11	PIN, POST			
TP1113	* 1-537-864-11	PIN, POST			
		<CRYSTAL>			
X1100	1-767-280-21	VIBRATOR, CRYSTAL (3.6864 MHz)			
**********					
	* A-1195-156-A	P COMPL			
		*********			
	⚠4-051-742-01	SHEET, INSULATE			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	7-682-647-09	SCREW +PS 3X6			
		<CAPACITOR>			
C501	1-107-907-11	ELECT	22µF	20%	25V
C502	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C503	1-107-888-11	ELECT	47µF	20%	25V
C504	1-164-343-11	CERAMIC CHIP	0.056µF	10%	25V
C505	1-107-906-11	ELECT	10µF	20%	50V
C506	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C508	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C509	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C510	1-107-909-11	ELECT	47µF	20%	16V
C511	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C512	1-107-902-11	ELECT	1µF	20%	50V
C513	1-163-121-00	CERAMIC CHIP	150PF	5%	50V

Ref.No.	Part No.	Description			Remark
C514	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C515	1-107-903-11	ELECT	2.2µF	20%	50V
C516	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C517	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C518	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C519	1-164-343-11	CERAMIC CHIP	0.056µF	10%	25V
C520	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C521	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C522	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C523	1-126-964-11	ELECT	10µF	20%	50V
C524	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C525	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C526	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C527	1-107-906-11	ELECT	10µF	20%	50V
C528	1-104-664-11	ELECT	47µF	20%	25V
C529	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C530	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C531	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C532	1-107-955-11	ELECT	100µF	20%	200V
C533	1-107-906-11	ELECT	10µF	20%	50V
C534	1-162-318-11	CERAMIC	0.001µF	10%	500V
C535	1-107-995-11	ELECT	100µF		160V
C536	1-107-364-11	MYLAR	0.01µF	10%	200V
C537	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C538	1-126-963-11	ELECT	4.7µF	20%	50V
C539	1-117-644-11	FILM	10000PF	3%	1.2KV
C540	1-107-746-51	ELECT	10µF	20%	200V
C541	1-107-746-51	ELECT	10µF	20%	200V
C542	1-137-591-91	FILM	0.0082µF	5%	800V
C543	1-104-664-11	ELECT	47µF	20%	25V
C544	1-108-385-91	MYLAR	0.047µH	10%	100V
C545	1-115-522-11	FILM	1µF	5%	250V
C546	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C547	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C548	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C549	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C550	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C551	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C552	1-107-954-91	ELECT	47µF	20%	200V
C553	1-102-228-00	CERAMIC	470PF	10%	500V
C554	1-126-968-11	ELECT	100µF	20%	50V
C555	1-162-318-11	CERAMIC	0.001µF	10%	500V
C556	1-162-318-11	CERAMIC	0.001µF	10%	500V
C557	1-111-116-11	ELECT	100µF	20%	50V
C558	1-126-964-11	ELECT	10µF	20%	50V
C559	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C560	1-130-471-00	MYLAR	0.001µF	5%	50V
C561	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C562	1-104-664-11	ELECT	47µF	20%	25V
C563	1-115-732-11	ELECT	330µF	20%	6.3V
C564	1-137-150-11	MYLAR	0.01µF	10%	100V
C565	1-137-150-11	MYLAR	0.01µF	10%	100V
C566	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C567	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C568	1-115-789-11	ELECT	0.001F	20%	25V
C569	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C570	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C571	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C572	1-107-902-11	ELECT	1µF	20%	50V
C574	1-163-809-11	CERAMIC CHIP	0.047µF	10%	25V
C575	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C576	1-136-161-00	MYLAR	0.047µF	5%	50V
C577	1-136-165-00	MYLAR	0.1µF	5%	50V
C578	1-107-902-11	ELECT	1µF	20%	50V
C579	1-107-909-11	ELECT	47µF	20%	16V
C581	1-128-526-11	ELECT	100µF	20%	16V

P

Ref.No.	Part No.	Description			Remark
C583	1-107-995-11	ELECT	100µF		160V
C584	1-107-889-11	ELECT	220µF	20%	25V
C585	1-104-653-11	ELECT	220µF	20%	16V
C587	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C588	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C589	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C590	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C592	1-107-888-91	ELECT	47µF	20%	25V
	<CONNECTOR>				
CN501	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE)10P			
CN502	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN503	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P			
CN505	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN506	* 1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P			
	<DIODE>				
D501	8-719-073-01	DIODE MA111-(K8).S0			
D502	8-719-073-01	DIODE MA111-(K8).S0			
D503	8-719-158-49	DIODE RD12SB2			
D504	8-719-073-01	DIODE MA111-(K8).S0			
D505	8-719-158-49	DIODE RD12SB2			
D506	8-719-158-49	DIODE RD12SB2			
D507	8-719-158-40	DIODE RD10SB1			
D508	8-719-073-01	DIODE MA111-(K8).S0			
D509	8-719-989-21	DIODE SC311-6-TE12RA			
D510	8-719-073-01	DIODE MA111-(K8).S0			
D511	8-719-107-15	DIODE RD18M-T1B2			
D512	8-719-073-01	DIODE MA111-(K8).S0			
D513	8-719-073-01	DIODE MA111-(K8).S0			
D514	8-719-073-01	DIODE MA111-(K8).S0			
D515	8-719-989-21	DIODE SC311-6-TE12RA			
D516	8-719-073-01	DIODE MA111-(K8).S0			
D517	8-719-073-01	DIODE MA111-(K8).S0			
D518	8-719-073-01	DIODE MA111-(K8).S0			
D519	8-719-073-01	DIODE MA111-(K8).S0			
D520	8-719-029-04	DIODE D5L60			
D521	8-719-073-01	DIODE MA111-(K8).S0			
D522	8-719-073-01	DIODE MA111-(K8).S0			
D523	8-719-110-67	DIODE RD27ESB2			
D524	8-719-110-67	DIODE RD27ESB2			
D525	8-719-302-43	DIODE EL1Z			
D526	8-719-302-43	DIODE EL1Z			
D527	8-719-302-43	DIODE EL1Z			
D528	8-719-073-01	DIODE MA111-(K8).S0			
D529	8-719-073-01	DIODE MA111-(K8).S0			
D530	8-719-210-43	DIODE EC10QS-06			
D531	8-719-110-67	DIODE RD27ESB2			
D532	8-719-037-53	DIODE RD27SB-T1			
D533	8-719-073-01	DIODE MA111-(K8).S0			
D534	8-719-073-01	DIODE MA111-(K8).S0			
D535	8-719-158-57	DIODE RD15SB2			
D536	8-719-073-01	DIODE MA111-(K8).S0			
D537	8-719-110-02	DIODE RD7.5ESB1			
D538	8-719-033-53	DIODE RD6.8SB2-T1			
D539	8-719-073-01	DIODE MA111-(K8).S0			
	<IC>				
IC501	8-759-209-69	IC TC4S11F			
IC502	8-759-158-82	IC CXA1544M-T6			
IC503	8-759-914-04	IC TL494CNS			
IC504	⚠ 8-759-198-31	IC UPC1093J-1-T			
IC505	8-759-209-69	IC TC4S11F			
IC506	8-759-185-47	IC IR2112			
IC507	8-759-198-31	IC UPC1093J-1-T			
IC508	8-759-502-80	IC LM358M			
IC509	8-759-502-84	IC LM393M			
IC510	8-759-337-67	IC NJM2360AM(TE2)			
IC511	8-759-502-80	IC LM358M			
	<COIL>				
L504	1-406-663-21	INDUCTOR	47µH		
L505	1-419-346-11	COIL, CHOKE			
L507	1-406-661-11	INDUCTOR	22µH		
L508	1-408-623-21	INDUCTOR	470µH		
	<NEON LAMP>				
NL501	1-519-526-11	LAMP, NEON			
NL502	1-519-526-11	LAMP, NEON			
	<TRANSISTOR>				
Q502	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q503	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q504	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q505	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q506	8-729-019-85	TRANSISTOR 2SC3392-5-TB			
Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q508	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q509	8-729-824-24	TRANSISTOR 2SA1338-5-TB			
Q510	8-729-019-85	TRANSISTOR 2SC3392-5-TB			
Q511	8-729-019-85	TRANSISTOR 2SC3392-5-TB			
Q512	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q513	8-729-824-24	TRANSISTOR 2SA1338-5-TB			
Q514	8-729-019-85	TRANSISTOR 2SC3392-5-TB			
Q515	8-729-050-47	TRANSISTOR 2SK3110			
Q516	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q517	8-729-926-77	TRANSISTOR IRFI640			
Q518	8-729-926-77	TRANSISTOR IRFI640			
Q519	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q520	8-729-050-71	TRANSISTOR IRFPE50LF20			
Q521	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q523	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q524	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q525	8-729-033-25	TRANSISTOR DTC114GKA			
Q526	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q527	8-729-032-54	TRANSISTOR IRFI840LF38			
Q528	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q529	8-729-027-38	TRANSISTOR DTA144EKA-T146			
Q530	1-801-806-11	TRANSISTOR DTC144EKA-T146			
	<RESISTOR>				
R503	1-216-075-00	RES,CHIP	12K	5%	1/10W
R504	1-216-025-91	RES,CHIP	100	5%	1/10W
R505	1-216-077-91	RES,CHIP	15K	5%	1/10W
R506	1-216-081-00	RES,CHIP	22K	5%	1/10W
R507	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R508	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R509	1-216-017-91	RES,CHIP	47	5%	1/10W
R510	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R511	1-249-381-11	CARBON	1	5%	1/4W F
R512	1-216-097-91	RES,CHIP	100K	5%	1/10W
R513	1-216-009-91	RES,CHIP	22	5%	1/10W
R514	1-216-101-00	RES,CHIP	150K	5%	1/10W
R515	1-216-025-91	RES,CHIP	100	5%	1/10W

Ref.No.	Part No.	Description			Remark
R516	1-216-025-91	RES,CHIP	100	5%	1/10W
R517	1-216-073-00	RES,CHIP	10K	5%	1/10W
R518	1-216-097-91	RES,CHIP	100K	5%	1/10W
R519	1-216-081-00	RES,CHIP	22K	5%	1/10W
R520	1-216-089-91	RES,CHIP	47K	5%	1/10W
R521	1-216-073-00	RES,CHIP	10K	5%	1/10W
R522	1-216-049-91	RES,CHIP	1K	5%	1/10W
R523	1-216-073-00	RES,CHIP	10K	5%	1/10W
R524	1-216-073-00	RES,CHIP	10K	5%	1/10W
R525	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R526	1-216-073-00	RES,CHIP	10K	5%	1/10W
R527	1-216-025-91	RES,CHIP	100	5%	1/10W
R528	1-216-083-00	RES,CHIP	27K	5%	1/10W
R529	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R530	1-216-009-91	RES,CHIP	22	5%	1/10W
R531	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R532	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R533	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R534	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R535	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R536	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R537	1-216-073-00	RES,CHIP	10K	5%	1/10W
R538	1-216-043-91	RES,CHIP	560	5%	1/10W
R539	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R540	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R541	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R543	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R544	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R545	1-216-073-00	RES,CHIP	10K	5%	1/10W
R546	1-216-073-00	RES,CHIP	10K	5%	1/10W
R547	1-216-043-91	RES,CHIP	560	5%	1/10W
R548	1-216-073-00	RES,CHIP	10K	5%	1/10W
R549	⚠1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R550	1-216-295-91	SHORT	0		
R551	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R552	1-216-081-00	RES,CHIP	22K	5%	1/10W
R553	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R554	1-216-081-00	RES,CHIP	22K	5%	1/10W
R555	⚠1-218-758-11	METAL CHIP	180K	0.50%	1/10W
R556	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R557	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R558	1-216-049-91	RES,CHIP	1K	5%	1/10W
R559	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R560	1-216-073-00	RES,CHIP	10K	5%	1/10W
R561	1-216-089-91	RES,CHIP	47K	5%	1/10W
R562	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R563	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R564	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
R565	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R566	1-216-073-00	RES,CHIP	10K	5%	1/10W
R567	1-216-001-00	RES,CHIP	10	5%	1/10W
R568	1-219-718-11	CEMENTED	0.1	10%	5W
R569	1-216-001-00	RES,CHIP	10	5%	1/10W
R570	1-216-001-00	RES,CHIP	10	5%	1/10W
R571	1-216-073-00	RES,CHIP	10K	5%	1/10W
R572	1-216-073-00	RES,CHIP	10K	5%	1/10W
R573	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R574	1-216-073-00	RES,CHIP	10K	5%	1/10W
R575	1-216-001-00	RES,CHIP	10	5%	1/10W
R576	1-216-073-00	RES,CHIP	10K	5%	1/10W
R577	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R578	1-216-646-11	METAL CHIP	620	0.50%	1/10W
R579	1-216-658-11	METAL CHIP	2K	0.50%	1/10W
R580	1-216-041-00	RES,CHIP	470	5%	1/10W
R581	1-215-860-11	METAL OXIDE	33	5%	1W F

Ref.No.	Part No.	Description			Remark
R582	1-216-693-11	METAL CHIP	56K	0.50%	1/10W
R583	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R584	1-216-690-11	METAL CHIP	43K	0.50%	1/10W
R585	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R586	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R587	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
R588	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R589	1-249-377-11	CARBON	0.47	5%	1/4W F
R590	1-249-377-11	CARBON	0.47	5%	1/4W F
R591	1-249-377-11	CARBON	0.47	5%	1/4W F
R592	1-249-377-11	CARBON	0.47	5%	1/4W F
R593	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R594	1-216-073-00	RES,CHIP	10K	5%	1/10W
R595	1-216-081-00	RES,CHIP	22K	5%	1/10W
R596	1-216-081-00	RES,CHIP	22K	5%	1/10W
R597	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R598	1-216-073-00	RES,CHIP	10K	5%	1/10W
R599	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1501	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1502	1-216-629-11	METAL CHIP	120	0.50%	1/10W
R1503	1-216-662-11	METAL CHIP	3K	0.50%	1/10W
R1504	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1505	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1506	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1507	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R1508	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1509	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1510	1-219-759-11	CARBON	1M	5%	1/2W
R1511	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R1512	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1513	1-216-693-91	METAL CHIP	56K	0.50%	1/10W
R1514	1-218-774-11	METAL CHIP	820K	0.50%	1/10W
R1515	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1516	1-215-879-11	METAL OXIDE	47K	5%	1W F
R1517	1-216-081-00	RES,CHIP	22K	5%	1/10W
R1518	1-215-437-00	METAL	4.7K	1%	1/4W
R1519	1-218-753-11	METAL CHIP	110K	0.50%	1/10W
R1520	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1521	1-219-510-11	CARBON	470K	5%	1/2W
R1522	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1523	1-216-295-91	SHORT	0		
R1524	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R1526	1-216-025-91	RES,CHIP	100	5%	1/10W
R1527	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R1529	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R1530	1-247-885-91	RES	180K	5%	1/4W
R1531	1-216-113-00	RES,CHIP	470K	5%	1/10W
R1532	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R1533	1-216-675-91	METAL CHIP	10K	0.5%	1/10W

<TRANSFORMER>

T501	1-435-156-11	TRANSFORMER, FERRITE	
T502	⚠1-439-526-21	TRANSFORMER ASSY, FLYBACK	

<THERMISTOR>

TH501	1-807-973-11	THERMISTOR

****

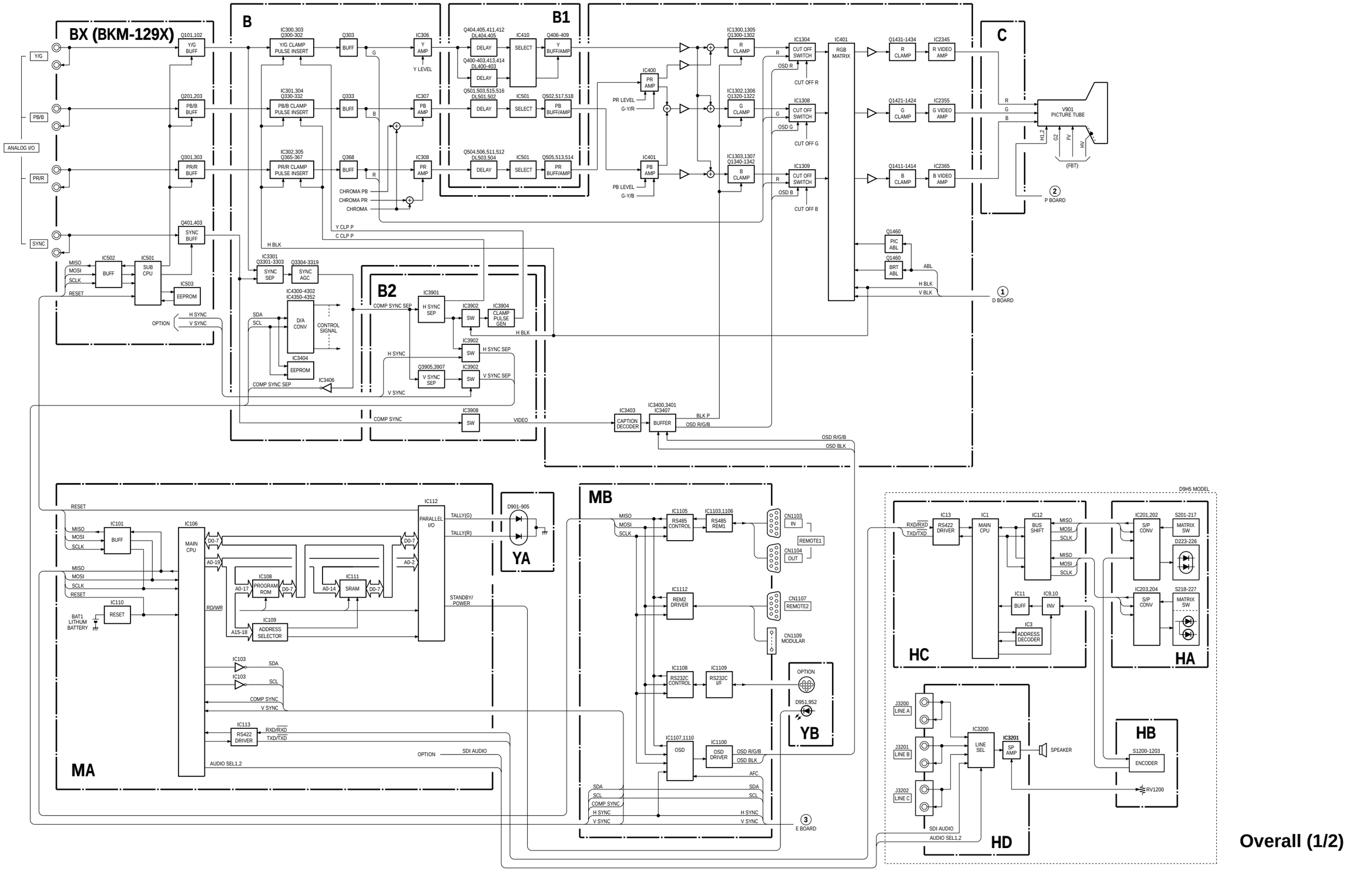
T YA YB

Ref.No.	Part No.	Description	Remark
	* A-1390-942-A	T MOUNT *********	
		<CONNECTOR>	
CN801	* 1-564-526-11	PLUG, CONNECTOR 11P	
CN802	1-774-525-11	SOCKET, CONNECTOR 64P	
CN803	1-774-525-11	SOCKET, CONNECTOR 64P	
CN804	1-774-525-11	SOCKET, CONNECTOR 64P	
CN805	* 1-564-523-11	PLUG, CONNECTOR 8P	
CN806	* 1-564-525-11	PLUG, CONNECTOR 10P	
**********			
	* A-1373-751-A	YA MOUNT **********	
		<CONNECTOR>	
CN900	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
		<DIODE>	
D900	8-719-054-22	DIODE SML-020MLTT87	
D901	8-719-054-22	DIODE SML-020MLTT87	
D902	8-719-054-22	DIODE SML-020MLTT87	
D903	8-719-054-22	DIODE SML-020MLTT87	
D904	8-719-054-22	DIODE SML-020MLTT87	
D905	8-719-054-22	DIODE SML-020MLTT87	
D906	8-719-054-22	DIODE SML-020MLTT87	
D907	8-719-054-22	DIODE SML-020MLTT87	
		<RESISTOR>	
R900	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R901	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R902	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R903	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R904	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R905	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R906	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R907	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R908	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R909	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R910	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R911	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R912	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R913	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R914	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
R915	1-216-071-00	RES,CHIP 8.2K 5% 1/10W	
**********			
	* A-1373-750-A	YB MOUNT **********	
		<CONNECTOR>	
CN951	* 1-564-726-11	PIN, CONNECTOR (SMALL TYPE)10P	
CN952	1-774-806-11	CONNECTOR, ROUND TYPE (8PIN) (INDICATOR)JACK	

Ref.No.	Part No.	Description	Remark
		<DIODE>	
D951	8-719-060-27	DIODE SLR-325MCT31	
D952	8-719-053-43	DIODE SLR-325VCT31	
D953	8-719-037-22	DIODE RD12SB-T1	
D954	8-719-037-22	DIODE RD12SB-T1	
D955	8-719-037-22	DIODE RD12SB-T1	
D956	8-719-037-22	DIODE RD12SB-T1	
D957	8-719-158-19	DIODE RD6.2SB	
D958	8-719-037-22	DIODE RD12SB-T1	
D959	8-719-037-22	DIODE RD12SB-T1	
**********			
		ACCESSORIES **********	
	X-4037-175-1	BEZEL (4:3) ASSY	
	⚠1-534-827-14	CORD, POWER 10A/125V	
	2-990-242-01	HOLDER (B), PLUG (POWER CORD)	
	3-867-938-01	MANUAL OPERATION (JAPANESE, ENGLISH)	
	4-073-253-01	PLATE, TALLY	

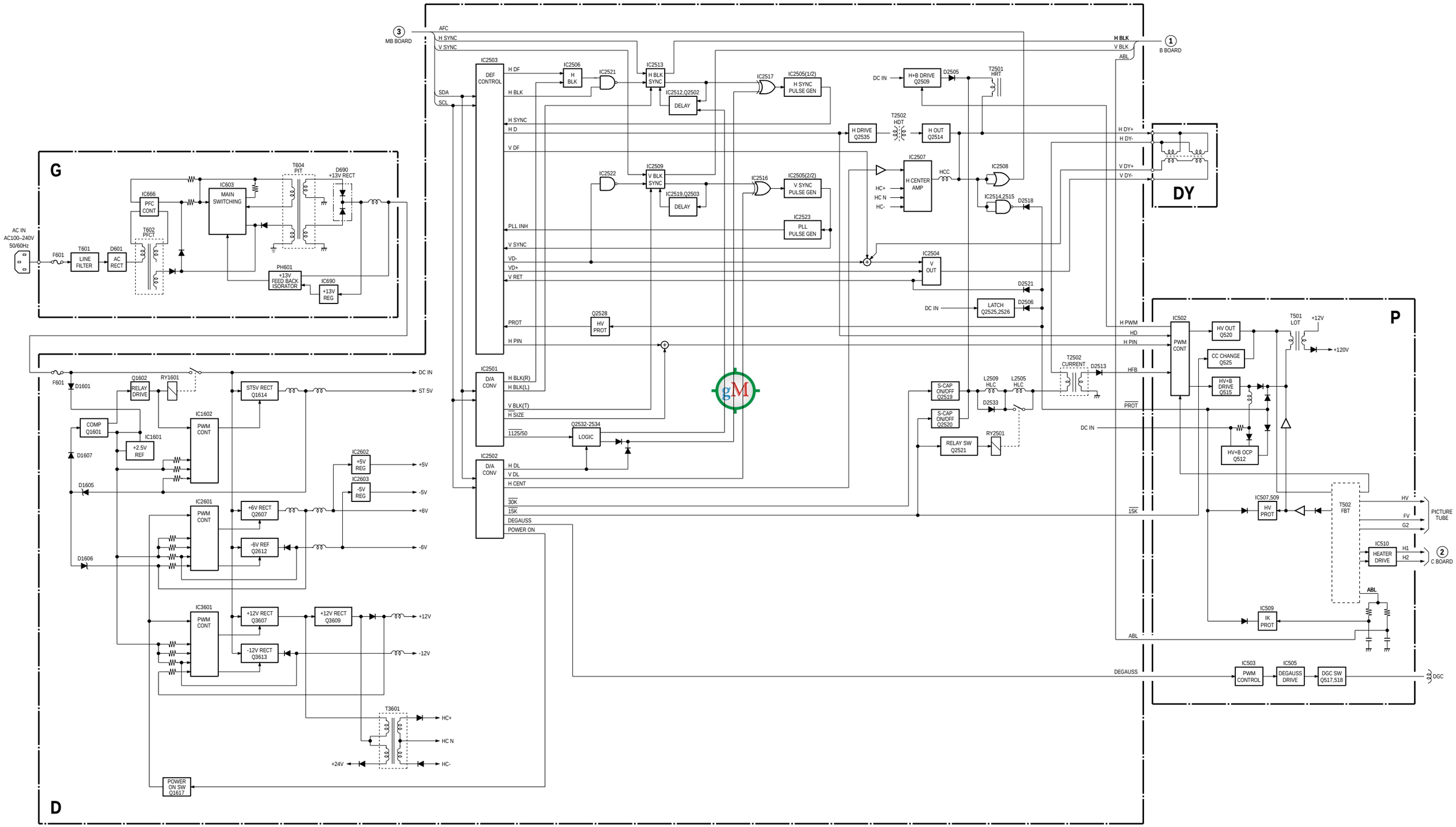
Section 10
Block Diagrams

Overall (1/2)



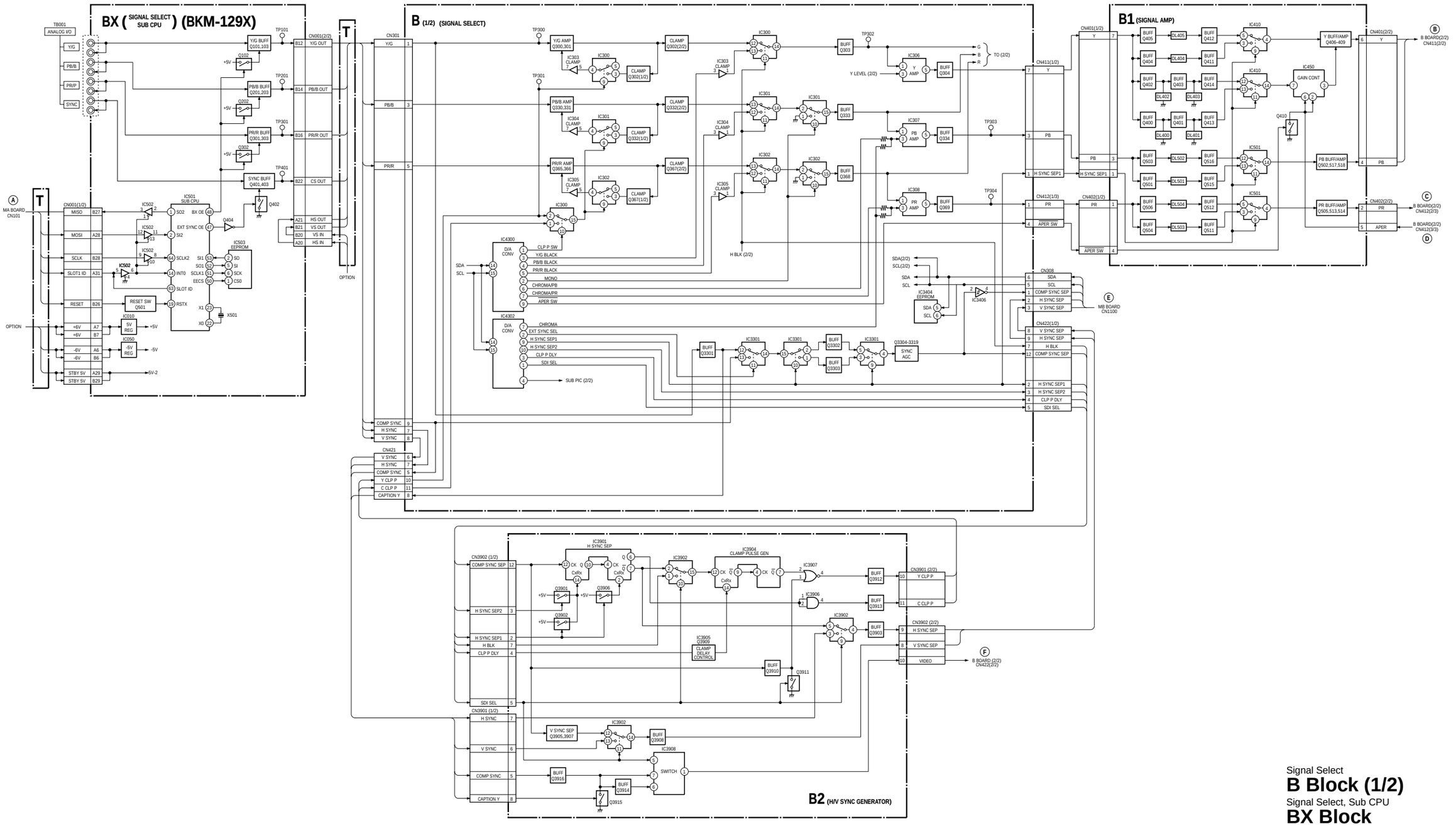
Overall (1/2)

Overall (2/2)



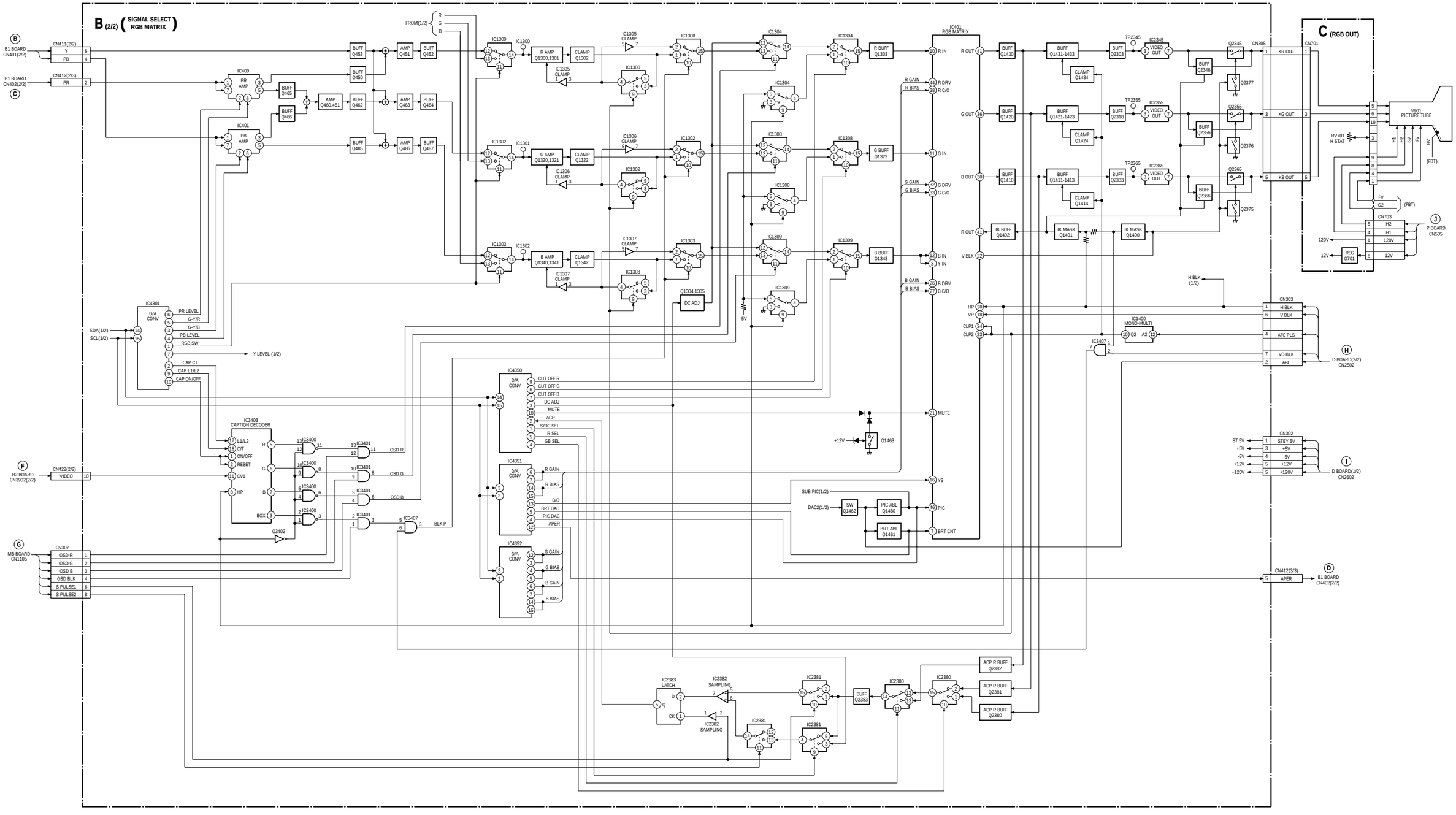
Overall (2/2)

B Block (1/2)
BX Block
B1 Block
B2 Block



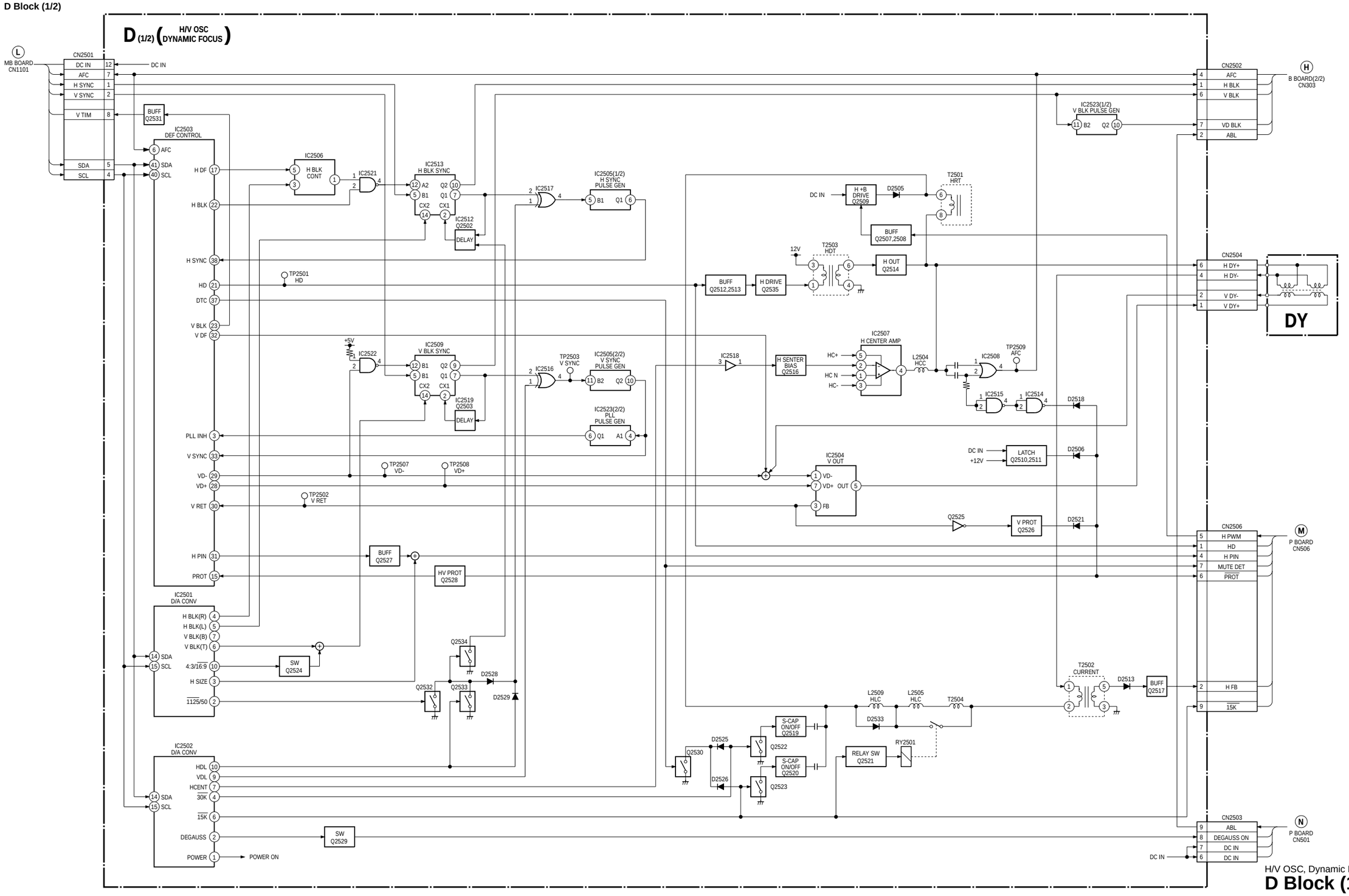
Signal Select
B Block (1/2)
Signal Select, Sub CPU
BX Block
Signal Amp
B1 Block
H/V, Sync Generator
B2 Block

B Block (2/2)
C Block



Signal Select, RGB Matrix
B Block (2/2)
RGB Out
C Block

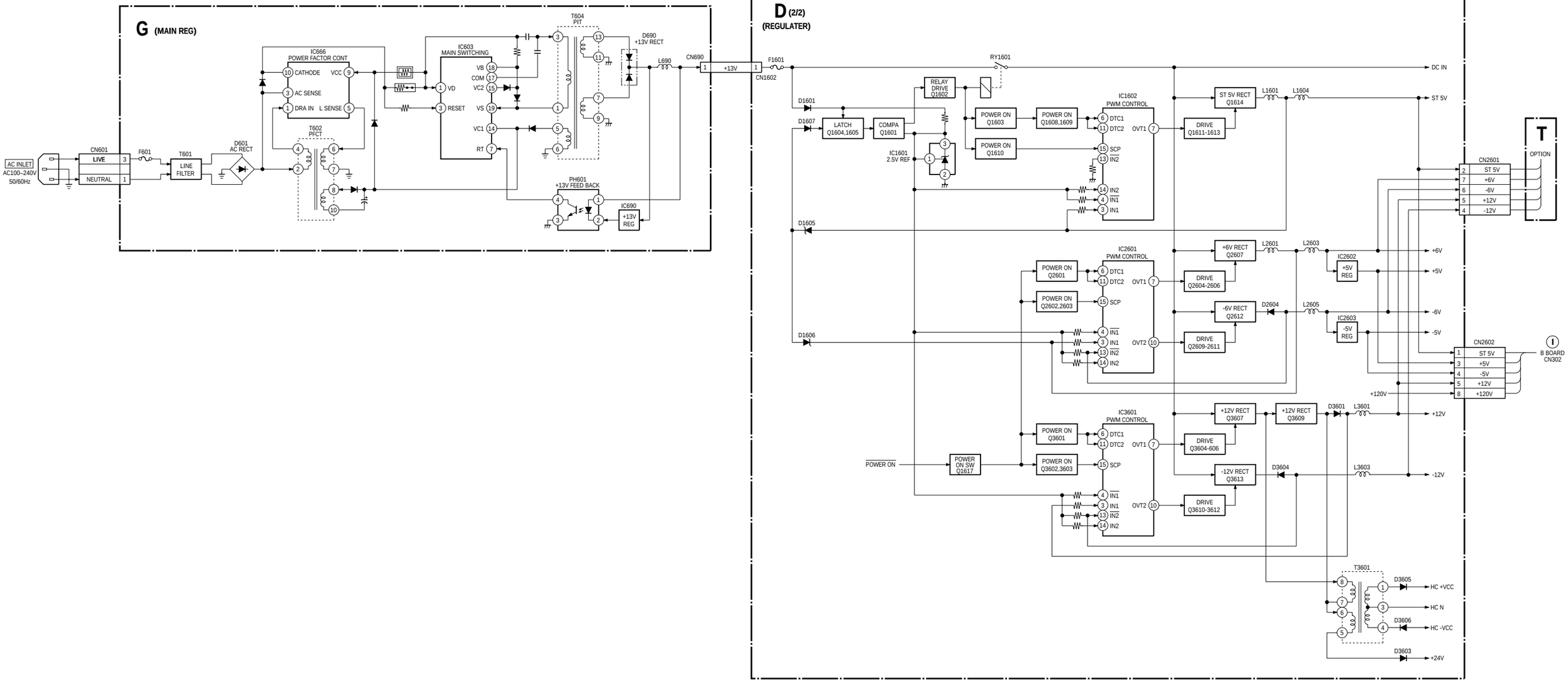
D Block (1/2)



H/V OSC, Dynamic Focus

D Block (1/2)

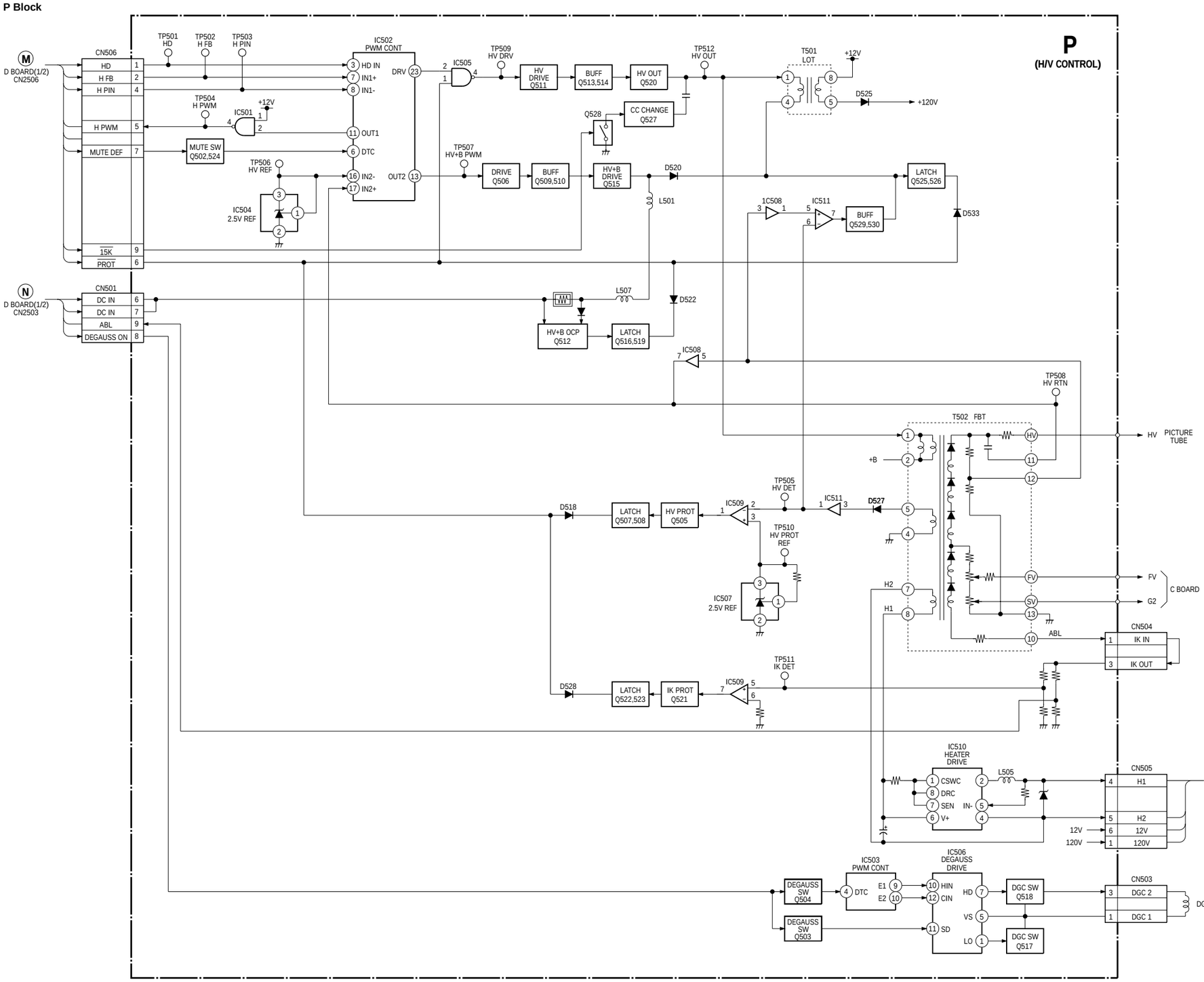
D Block (2/2)
G1 Block



Main Regulator
D Block (2/2)
Main Regulator
G1 Block

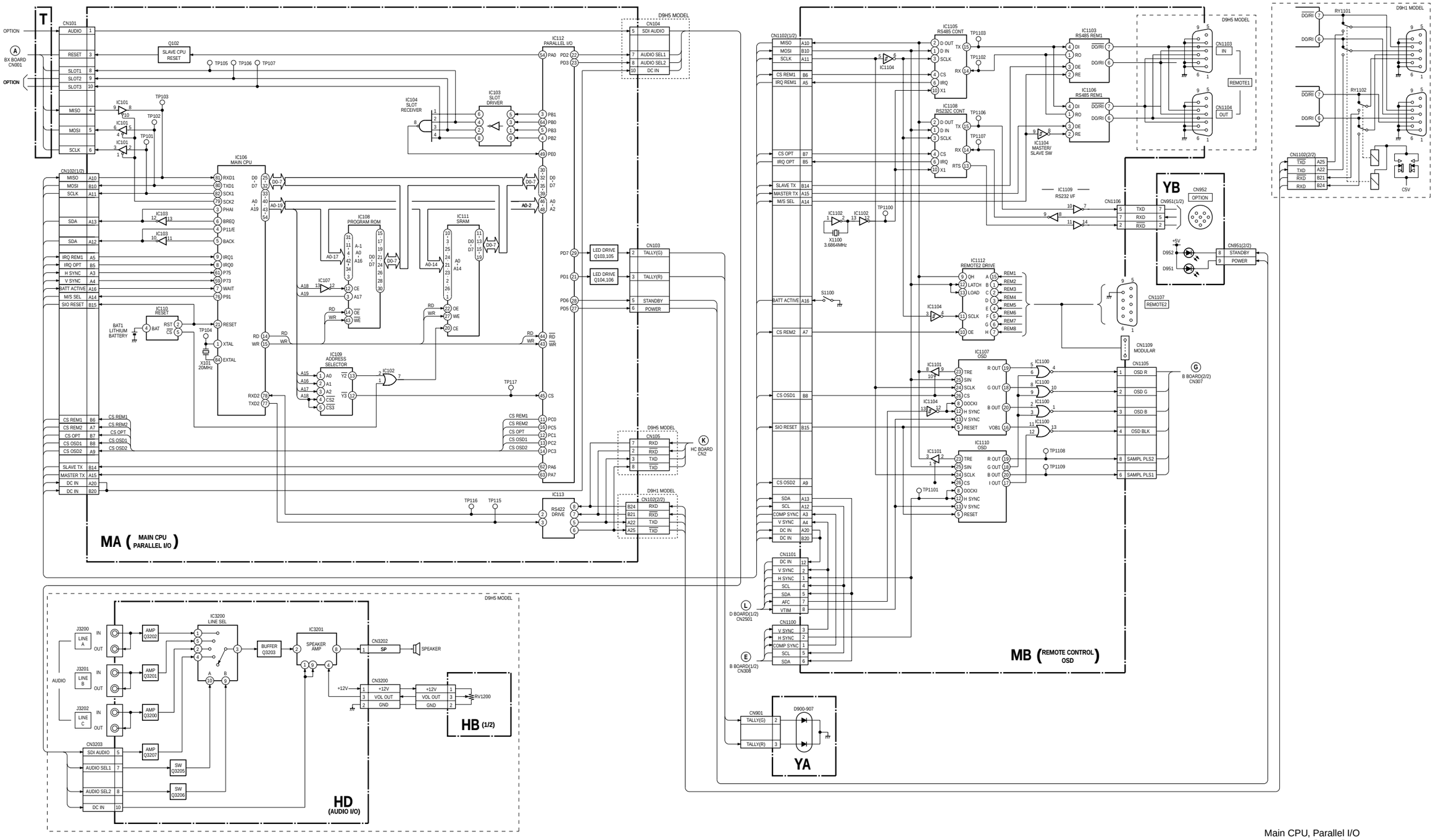
http://getMANUAL.com

P Block



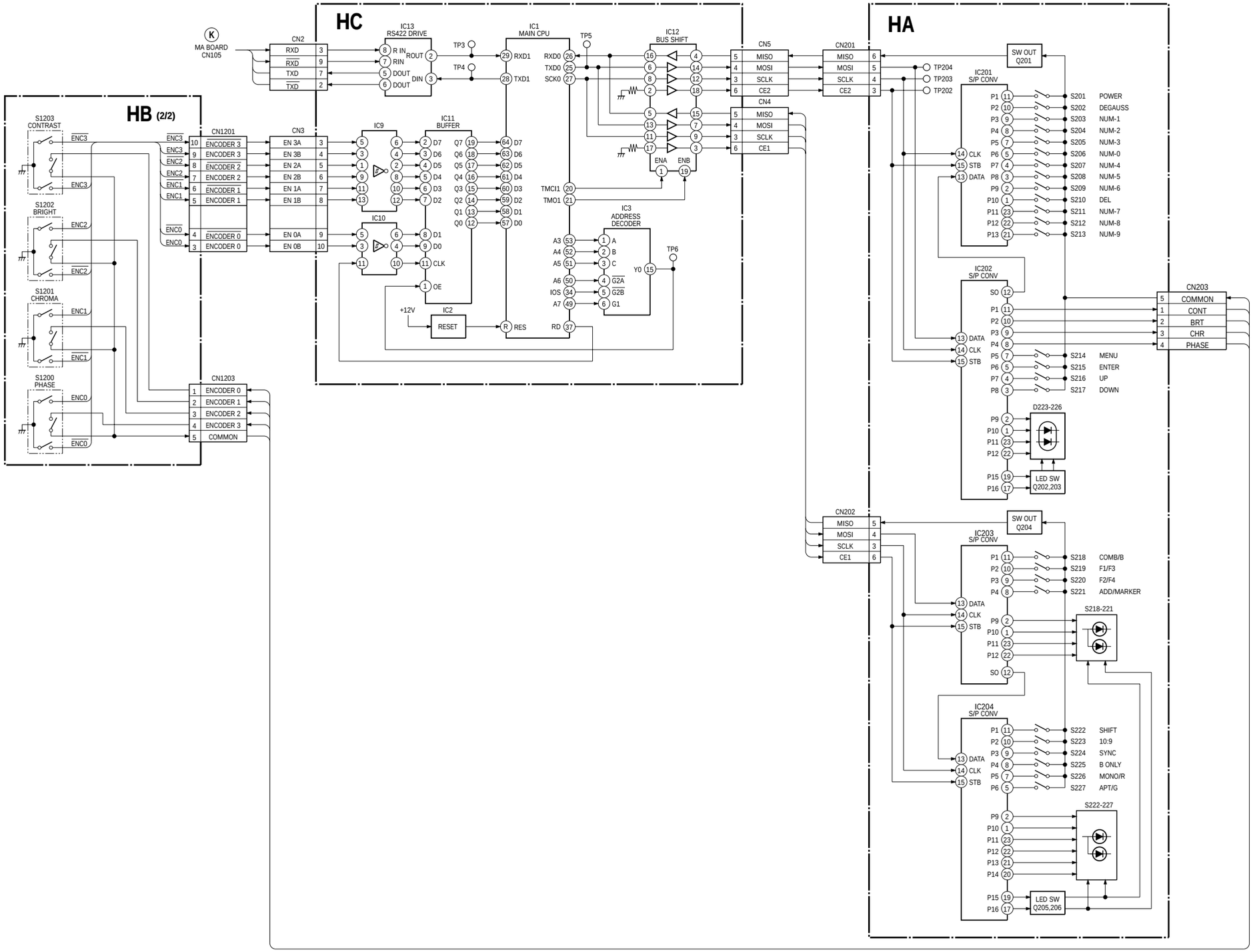
H/V Control
P Block

MA Block
MB Block



Main CPU, Parallel I/O
MA Block
Remote Control OSD
MB Block

HA Block
HB Block
HC Block



Serial to Parallel Converter
HA Block
Switch
HB Block
Main CPU
HC Block

Section 11
Diagrams

Note:

- Parts marked " * " differ according to the model/destination. Refer to the mount table for each function.
- The parts marked " # " on schematic diagrams are not mounted.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics.
- All electrolytics are in 50 V unless otherwise specified.
- : fusible resistor
- : nonflammable resistor
- Δ : internal component
- : panel designation and adjustment for repair
- Caution when replacing chip parts
  New parts must be attached after removal of the chip.
  Be careful not to heat the minus side of a tantalum capacitor, because it is easily damaged by the heat.

Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

- The components marked ⋈ in this schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
- When replacing components marked ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component marked ⋈ and repeat the adjustment until the specified value is achieved.

[Measuring conditions, voltage and waveform]

- A voltage value is the reference value between the measurement point and the earth, when the RGB color bar signal is received from the color bar generator (digital multi-meter used: 10 M ohms/ V DC).
- Unit of voltage is V (volt).
- : B+line
  : B– line
- Voltage variations may occur due to normal production tolerances.
- RGB color bar signal.
- Circled numbers indicate the reference waveform.
- : Signal path.

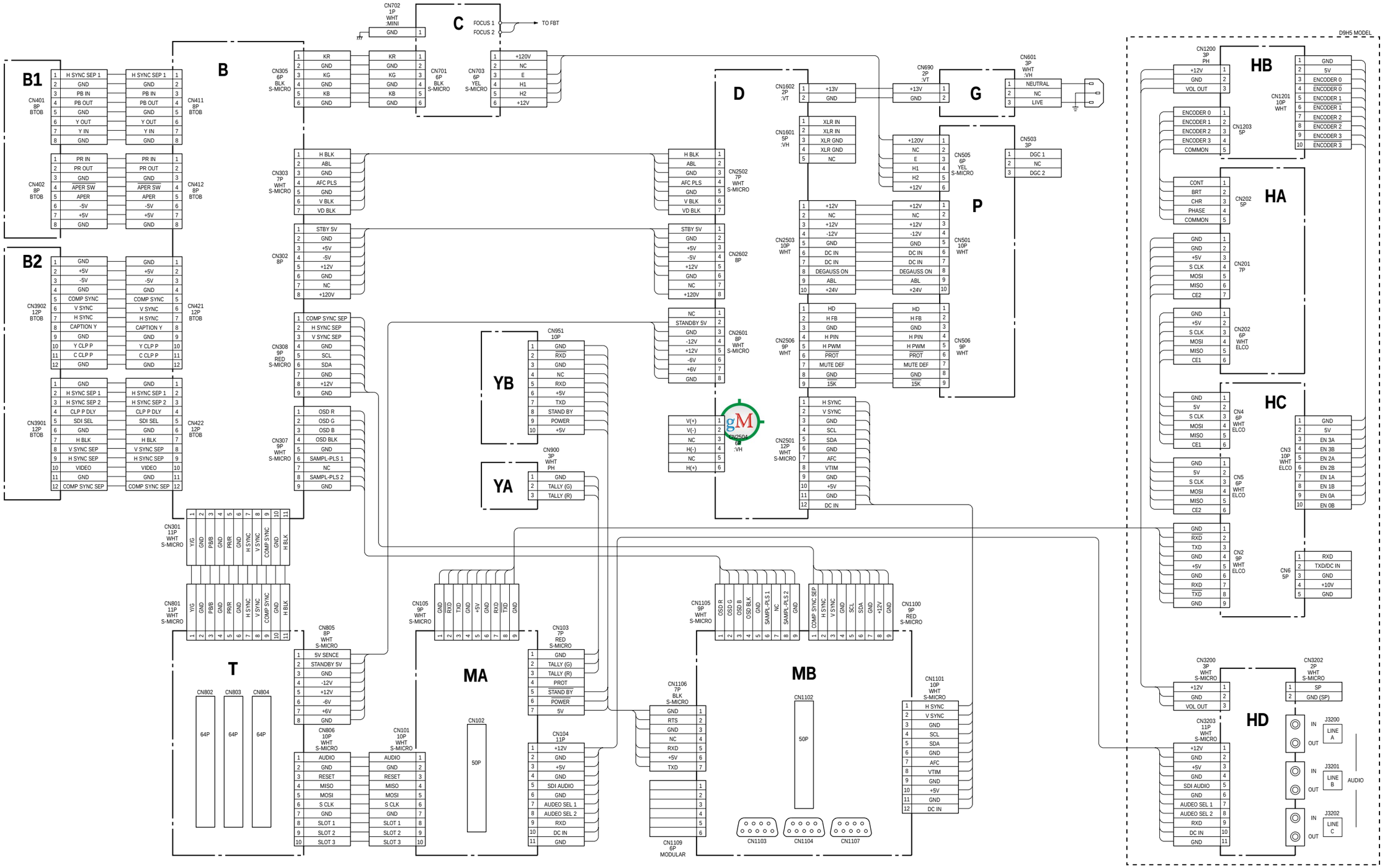
The components identified marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:
The circuit indicated as shown on the left contains high voltages of over 600 Vp-p. Take care to avoid electric shock during inspection or repair work.

11-1

11-1. Frame Schematic Diagram



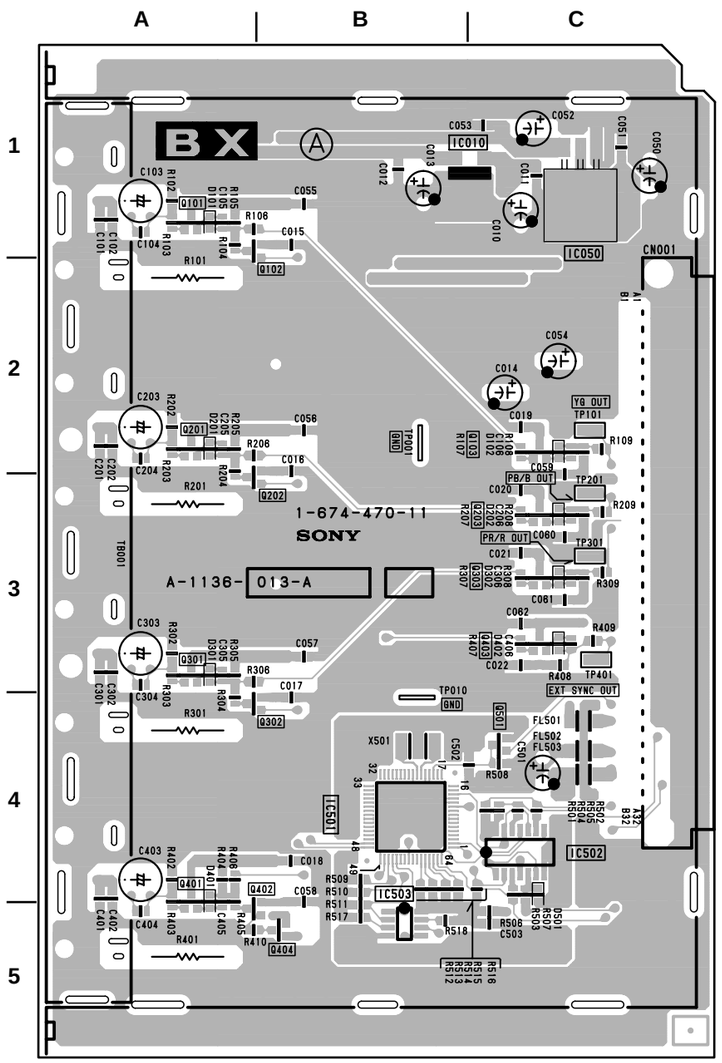
11-2. Schematic Diagrams and Printed Wiring Boards

[BX BOARD]

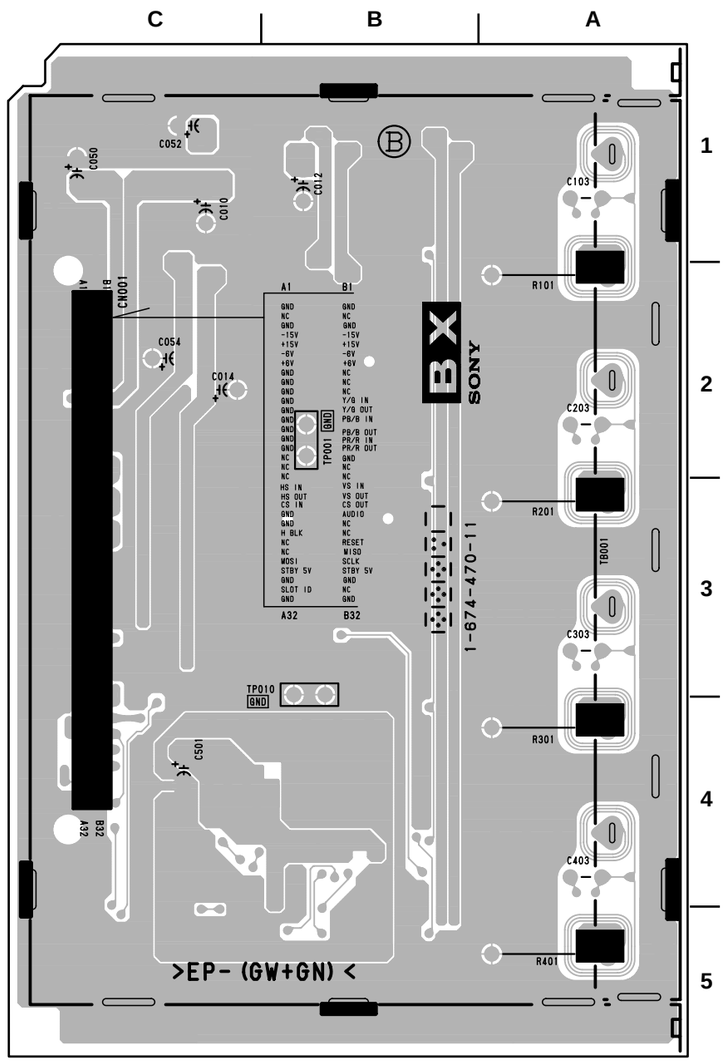
* : B SIDE

D101	A-1
D102	C-2
D201	A-2
D202	C-3
D301	A-3
D302	C-3
D401	A-4
D402	C-3
D501	C-5
IC010	B-1
IC050	C-1
IC501	B-4
IC502	C-4
IC503	B-5
Q101	A-1
Q102	B-2
Q103	C-2
Q201	A-2
Q202	B-3
Q203	C-3
Q301	A-3
Q302	B-4
Q303	C-3
Q401	A-4
Q402	B-4
Q403	C-3
Q404	B-5
Q501	C-4
TP001	B-2
TP010	B-4
TP101	C-2
TP201	C-3
TP301	C-3
TP401	C-3

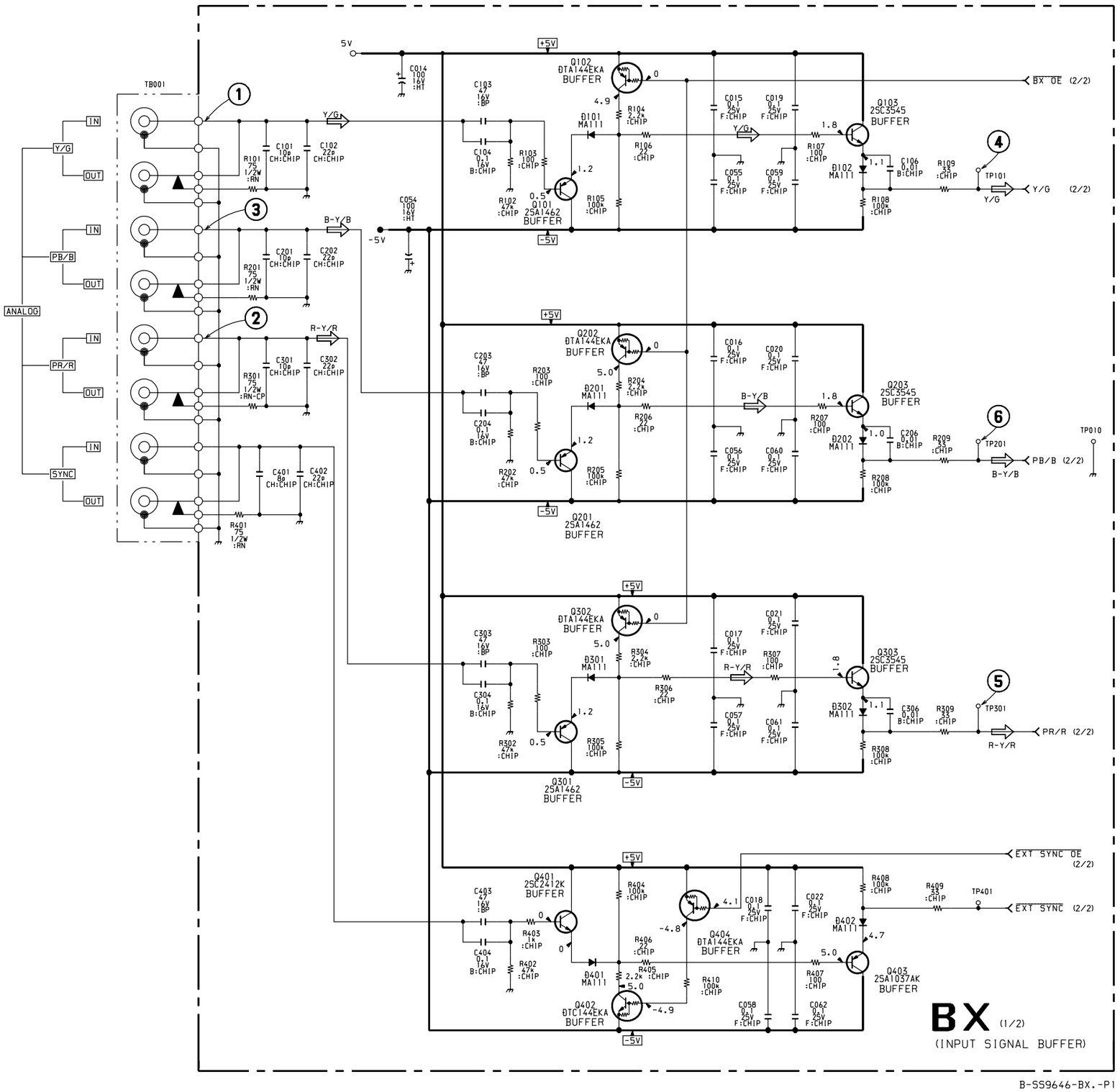
BX BOARD



BX –A SIDE–
SUFFIX: -11



BX –B SIDE–
SUFFIX: -11



B-SS9646-BX.-P1

BX BOARD WAVEFORMS

① 2.0Vp-p (H)

② 1.4Vp-p (H)

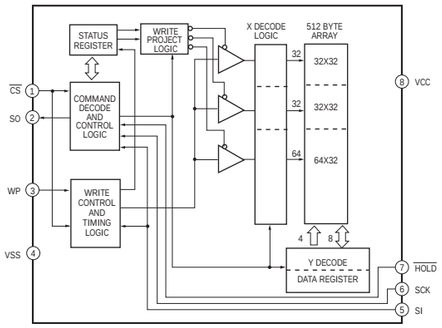
③ 1.4Vp-p (H)

④ 0.9Vp-p (H)

⑤ 0.6Vp-p (H)

⑥ 0.6Vp-p (H)

X25040S (IC503)

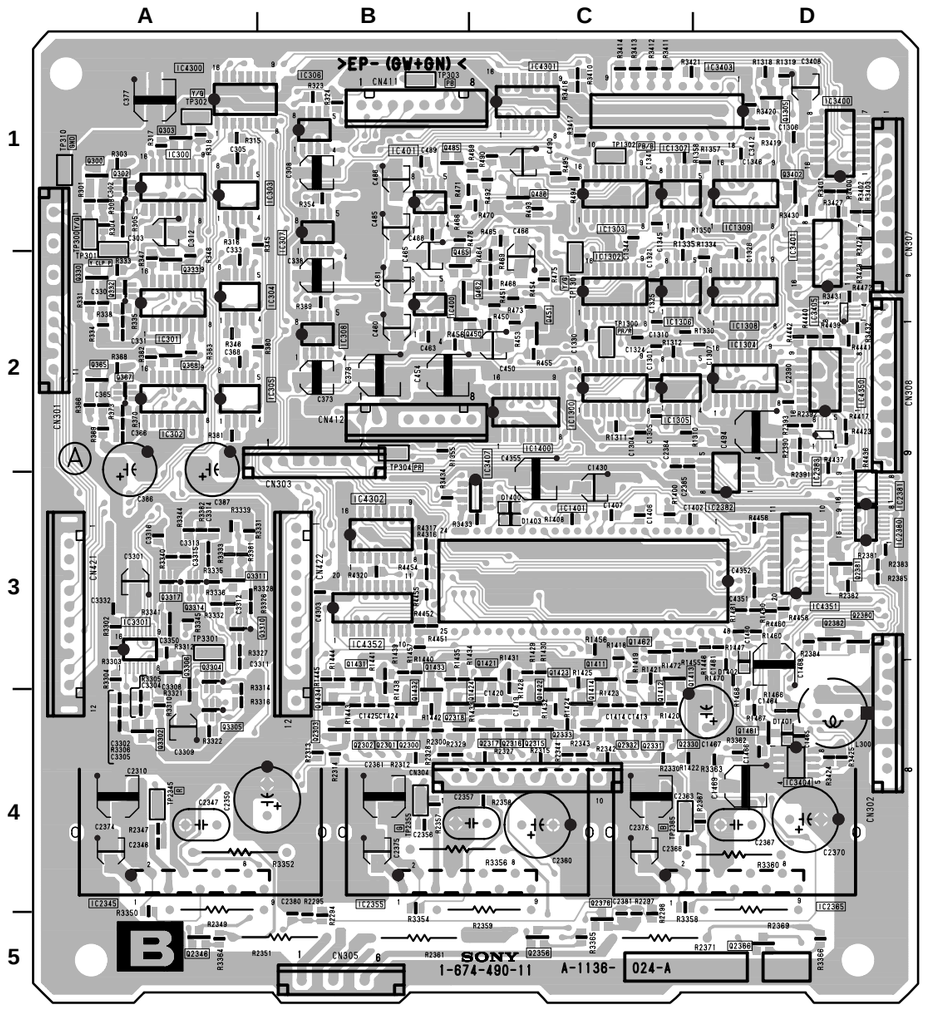


B BOARD

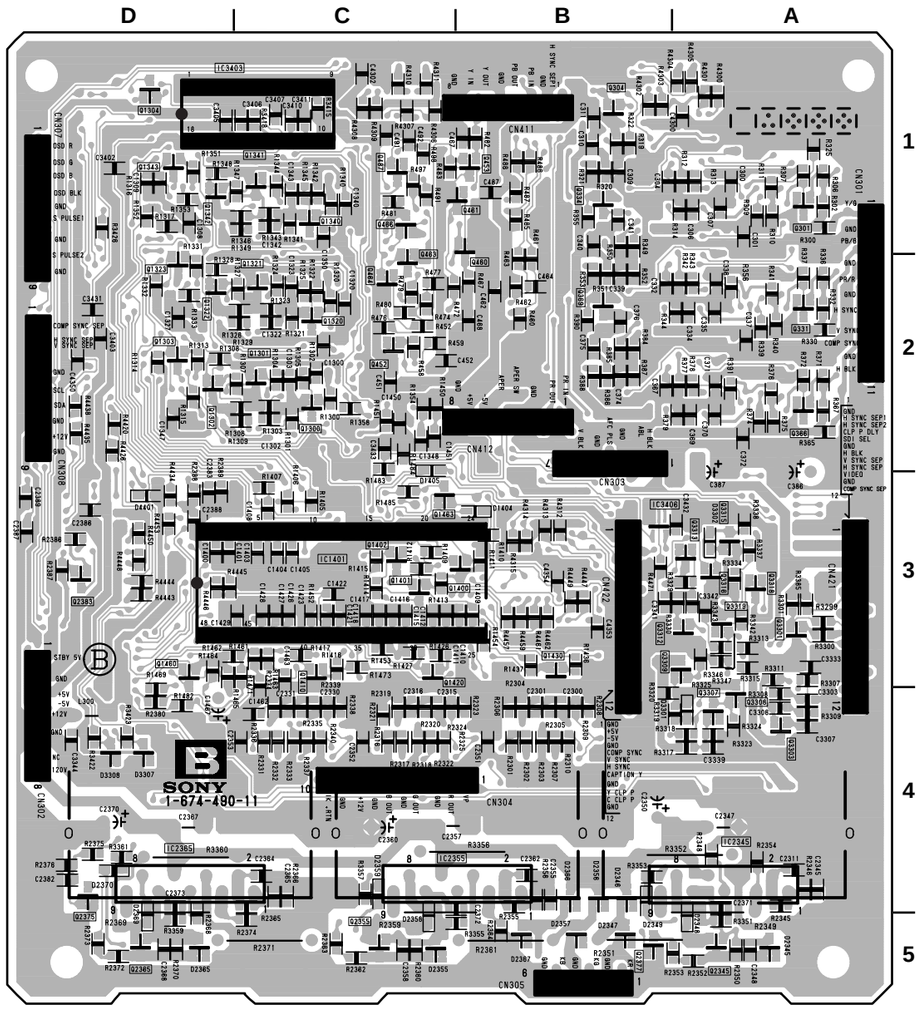
* : B SIDE

D1400	C-3	Q460	* B-1	TP300	A-1
D1401	D-4	Q461	* B-1	TP301	A-1
D1402	D-3	Q462	B-2	TP302	A-1
D1403	C-3	Q463	* C-1	TP303	B-1
D1404	* B-3	Q464	* C-2	TP304	B-2
D1405	* C-3	Q465	B-2	TP310	A-1
D2345	* A-5	Q466	* C-1	TP1300	C-2
D2346	* B-4	Q485	B-1	TP1301	C-2
D2347	* B-5	Q486	C-1	TP1302	C-1
D2348	* A-5	Q487	* C-1	TP2345	A-4
D2349	* B-5	Q1300	* C-2	TP2355	B-4
D2355	* C-5	Q1301	* C-2	TP2365	C-4
D2356	* B-4	Q1302	* D-2	TP3301	A-3
D2357	* B-5	Q1303	* D-2		
D2358	* C-5	Q1304	* D-1		
D2359	* C-4	Q1305	D-1		
D2365	* D-5	Q1320	* C-2		
D2366	* B-4	Q1321	* C-2		
D2367	* B-5	Q1322	* D-2		
D2369	* D-5	Q1323	* D-2		
D2370	* D-4	Q1340	* C-1		
D3301	* B-4	Q1341	* C-1		
D3302	* A-3	Q1342	* D-1		
D3307	* D-4	Q1343	* D-1		
D3308	* D-4	Q1400	* C-3		
D4401	* D-3	Q1401	C-3		
		Q1402	* C-3		
IC300	A-1	Q1410	* C-3		
IC301	A-2	Q1411	C-3		
IC302	A-2	Q1412	C-4		
IC303	A-1	Q1413	C-3		
IC304	A-2	Q1414	C-4		
IC305	A-2	Q1420	* C-3		
IC306	B-1	Q1421	C-3		
IC307	B-1	Q1422	C-4		
IC308	B-2	Q1423	C-3		
IC400	B-2	Q1424	C-4		
IC401	B-1	Q1430	* B-3		
IC1300	C-2	Q1431	B-3		
IC1302	C-2	Q1432	B-4		
IC1303	C-1	Q1433	B-3		
IC1304	D-2	Q1434	B-4		
IC1305	C-2	Q1460	* D-3		
IC1306	C-2	Q1461	D-4		
IC1307	C-1	Q1462	C-3		
IC1308	D-2	Q1463	* C-3		
IC1309	D-1	Q2300	B-4		
IC1400	C-2	Q2301	B-4		
IC1401	* C-3	Q2302	B-4		
IC2345	A-4	Q2303	B-4		
IC2355	B-4	Q2315	C-4		
IC2365	D-4	Q2316	C-4		
IC2380	D-3	Q2317	C-4		
IC2381	D-3	Q2318	B-4		
IC2382	D-3	Q2330	D-4		
IC2383	D-2	Q2331	C-4		
IC3301	A-3	Q2332	C-4		
IC3400	D-1	Q2333	C-4		
IC3401	D-1	Q2345	* A-5		
IC3403	D-1	Q2346	A-4		
IC3404	D-4	Q2355	* C-5		
IC3405	D-2	Q2356	C-5		
IC3406	* B-3	Q2365	* D-5		
IC3407	C-2	Q2366	D-5		
IC4300	A-1	Q2375	* D-5		
IC4301	C-1	Q2376	C-4		
IC4302	B-3	Q2377	* B-5		
IC4350	D-2	Q2380	D-3		
IC4351	D-3	Q2381	D-3		
IC4352	B-3	Q2382	D-3		
		Q2383	* D-3		
Q300	A-1	Q3301	* A-3		
Q301	* A-1	Q3302	A-4		
Q302	A-1	Q3303	* A-4		
Q303	A-1	Q3304	A-3		
Q304	* B-1	Q3305	A-4		
Q330	A-2	Q3306	A-3		
Q331	* A-2	Q3307	* A-4		
Q332	A-2	Q3308	* A-4		
Q333	A-2	Q3309	* B-3		
Q334	* B-1	Q3310	A-3		
Q365	A-2	Q3311	A-3		
Q366	* A-2	Q3312	* B-3		
Q367	A-2	Q3313	* A-3		
Q368	A-2	Q3314	A-3		
Q369	* B-2	Q3315	* A-3		
Q450	B-2	Q3316	* A-3		
Q451		Q3317	A-3		
Q452	* C-2	Q3318	* A-3		
Q453	* B-1	Q3319	* A-3		
		Q3402	D-1		

B BOARD

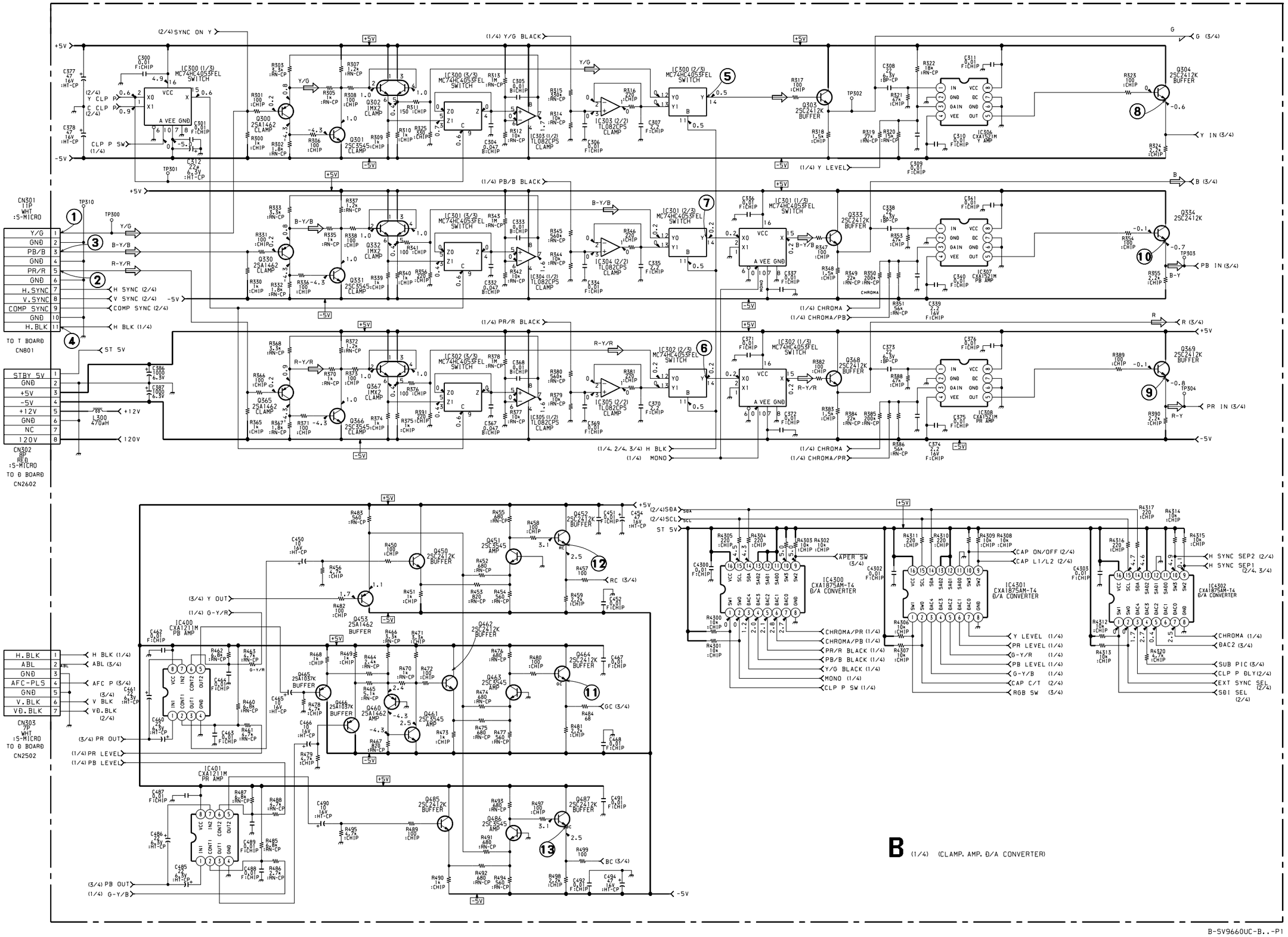


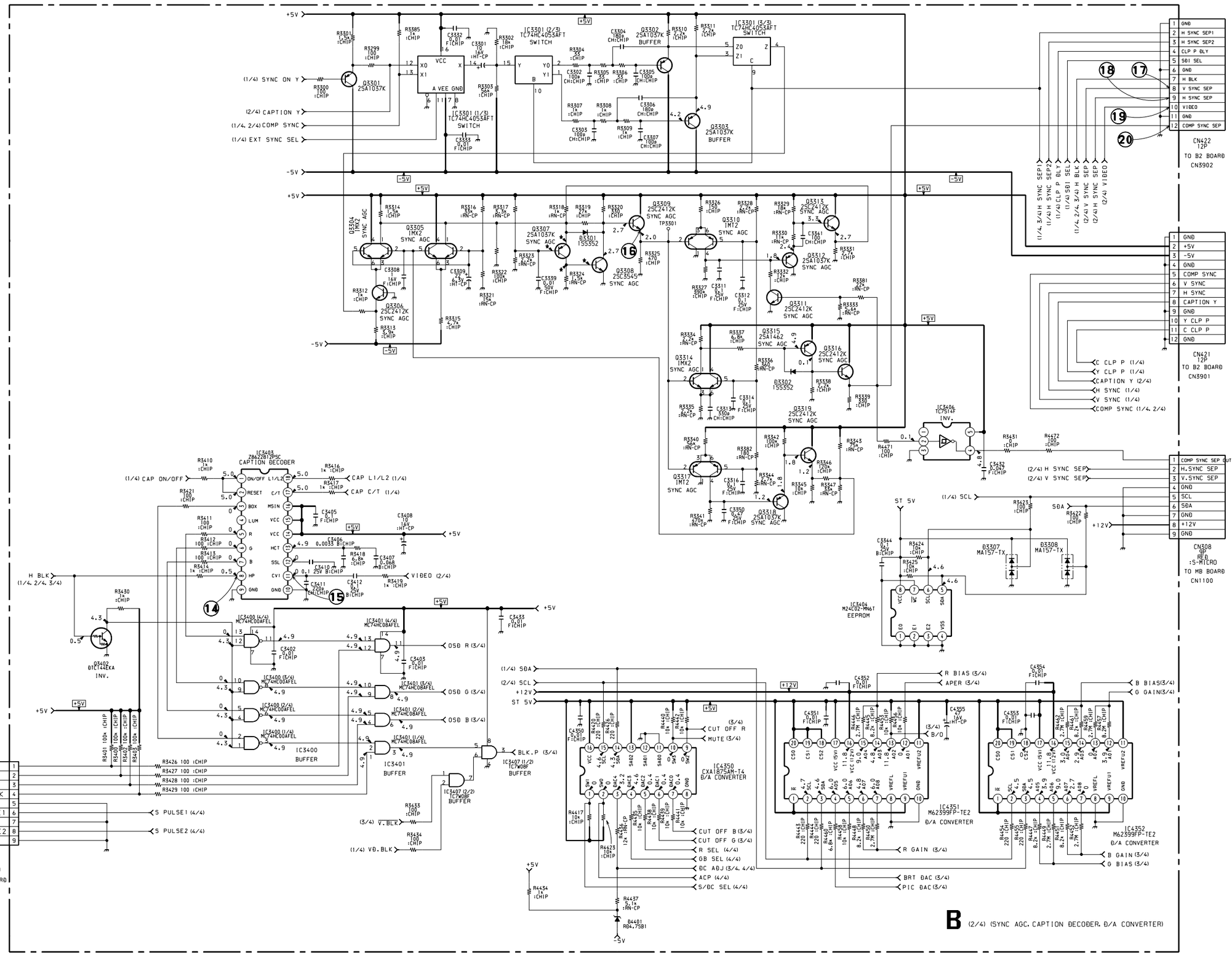
B –A SIDE–
SUFFIX: -11



B –B SIDE–
SUFFIX: -11

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B-SV9660UC-B..-P2

B (3/4) (RGB AMP, RGB MATRIX)

CN411 8P

H SYNC SEP	1
GND	2
PB IN	3
PB OUT	4
GND	5
Y OUT	6
Y IN	7
GND	8

TO B1 BOARD CN401

CN412 8P

PR IN	1
PR OUT	2
GND	3
APER SW	4
APER	5
-5V	6
+5V	7
GND	8

TO B1 BOARD CN402

IC1401 CX21709 RGB-MATRIX

IC1400 MC74HC4538AFEL MONO MULTI

Q1400 DTC144EKA IK-MASK

Q1402 2SA1037K IK-BUFFER

Q1401 2SC2412K IK BLK

Q1403 DTC144EKA SWITCH

Q1430 2SA1037K

Q1431 2SC2412K

Q1432 2SA1037K

Q1433 2SC2412K

Q1434 2SC2412K CLAMP

Q1430-Q1433 BUFFER

Q1420 2SA1037K

Q1421 2SC2412K

Q1422 2SA1037K

Q1423 2SC2412K

Q1424 2SC2412K CLAMP

Q1420-Q1423 BUFFER

Q1410 2SA1037K

Q1411 2SC2412K

Q1412 2SA1037K

Q1413 2SC2412K

Q1414 2SC2412K CLAMP

Q1410-Q1413 BUFFER

Q1460 2SC2412K PIC ABL

Q1461 2SC2412K BRT ABL

Q1320 2SA1462 CLAMP

Q1321 2SC3545 CLAMP

Q1322 2SC2412K CLAMP

Q1340 2SA1462 CLAMP

Q1341 2SC3545 CLAMP

Q1342 2SC2412K CLAMP

Q1300 2SA1462 CLAMP

Q1301 2SC3545 CLAMP

Q1302 2SC2412K CLAMP

Q1303 2SC2412K BUFFER

Q1323 2SC2412K BUFFER

Q1343 2SC2412K BUFFER

IC1300 (1/3) MC74HC4053FEL SWITCH

IC1300 (2/3) MC74HC4053FEL SWITCH

IC1300 (3/3) MC74HC4053FEL SWITCH

IC1302 (1/3) MC74HC4053FEL SWITCH

IC1302 (2/3) MC74HC4053FEL SWITCH

IC1302 (3/3) MC74HC4053FEL SWITCH

IC1303 (1/3) MC74HC4053FEL SWITCH

IC1303 (2/3) MC74HC4053FEL SWITCH

IC1303 (3/3) MC74HC4053FEL SWITCH

IC1304 (1/3) MC74HC4053FEL SWITCH

IC1304 (2/3) MC74HC4053FEL SWITCH

IC1304 (3/3) MC74HC4053FEL SWITCH

IC1305 (1/2) TL082CPS CLAMP

IC1305 (2/2) TL082CPS CLAMP

IC1306 (1/2) TL082CPS CLAMP

IC1306 (2/2) TL082CPS CLAMP

IC1307 (1/2) TL082CPS CLAMP

IC1307 (2/2) TL082CPS CLAMP

IC1308 (1/3) MC74HC4053FEL SWITCH

IC1308 (2/3) MC74HC4053FEL SWITCH

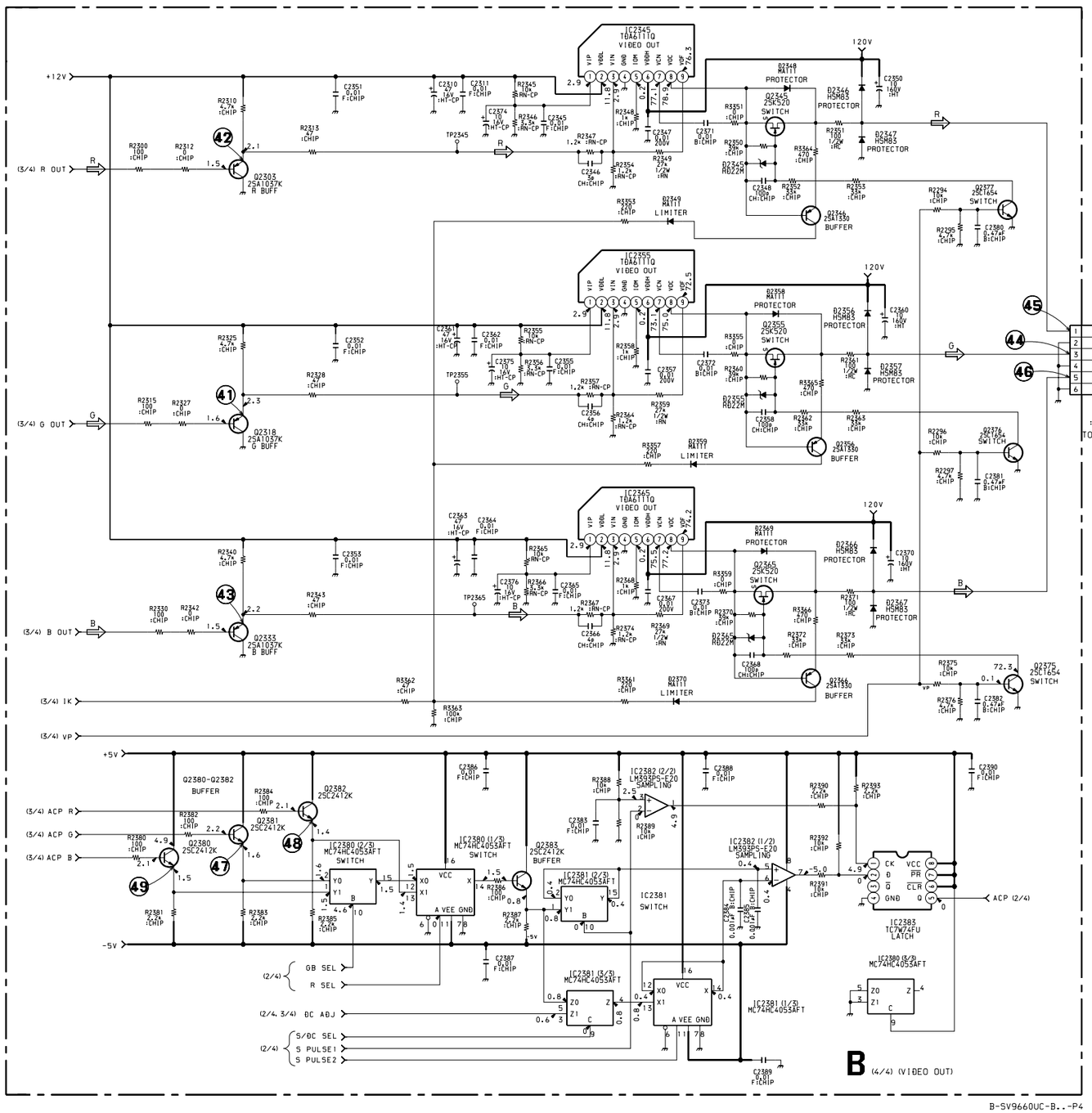
IC1308 (3/3) MC74HC4053FEL SWITCH

IC1309 (1/3) MC74HC4053FEL SWITCH

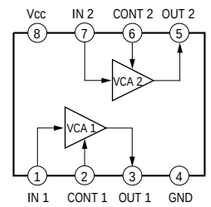
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IC1309 (3/3) MC74HC4053FEL SWITCH

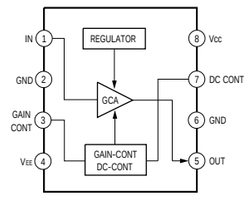
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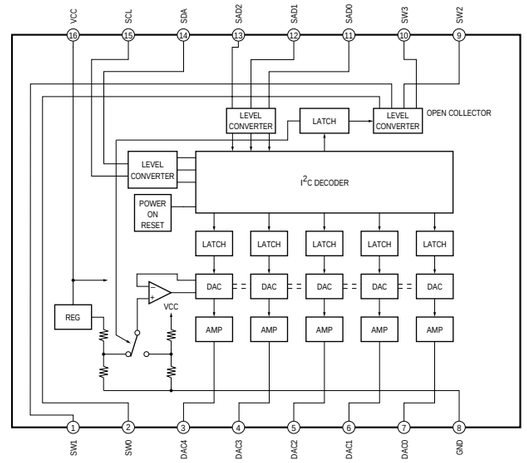
CXA1211M (IC400, 401)



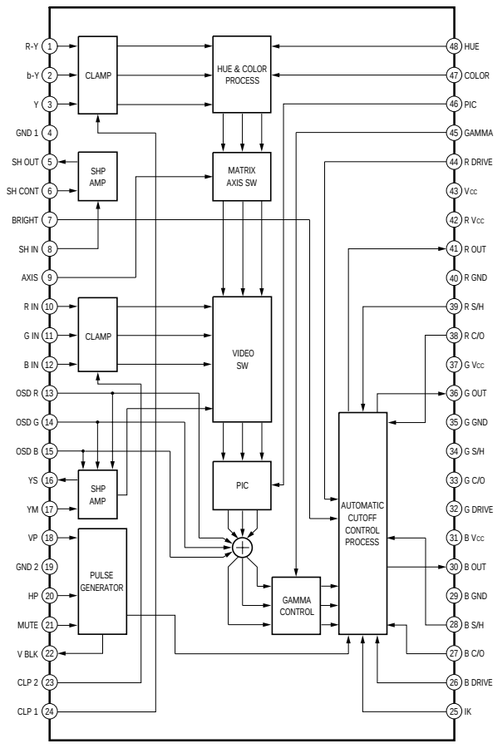
CXA1521M (IC306, 307, 308)



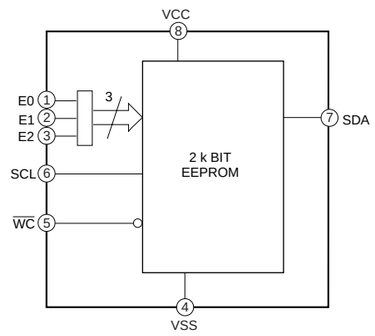
CXA1875AM-T4 (IC4300, 4301, 4302, 4350)



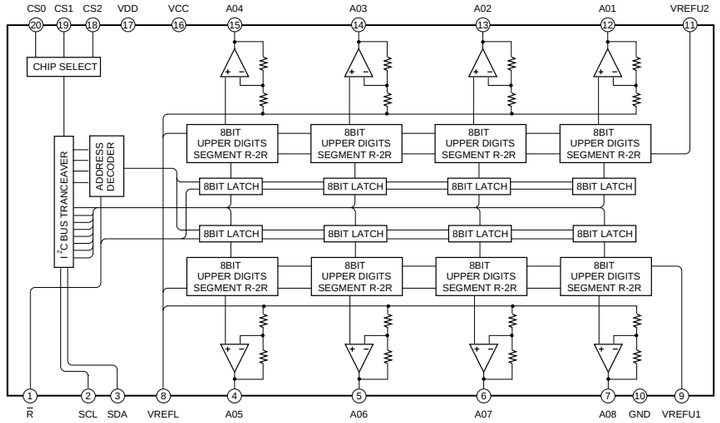
CXA1739S (IC1401)



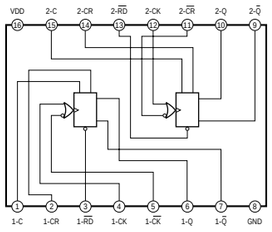
M24C02-MN6T (IC3404)



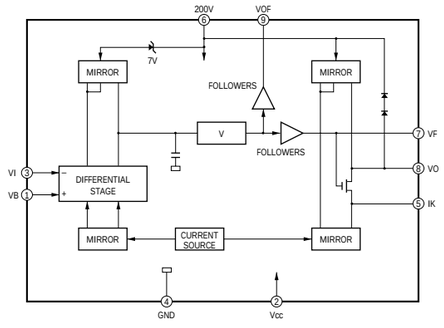
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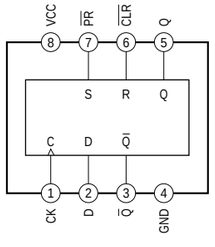
MC74HC4538AFEL (IC1400)



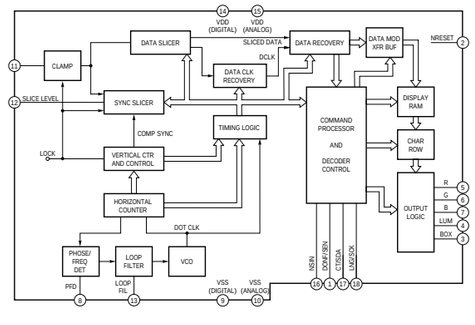
TDA6111Q (IC2345, 2355, 2365)



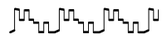
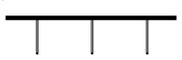
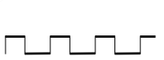
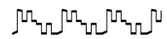
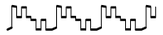
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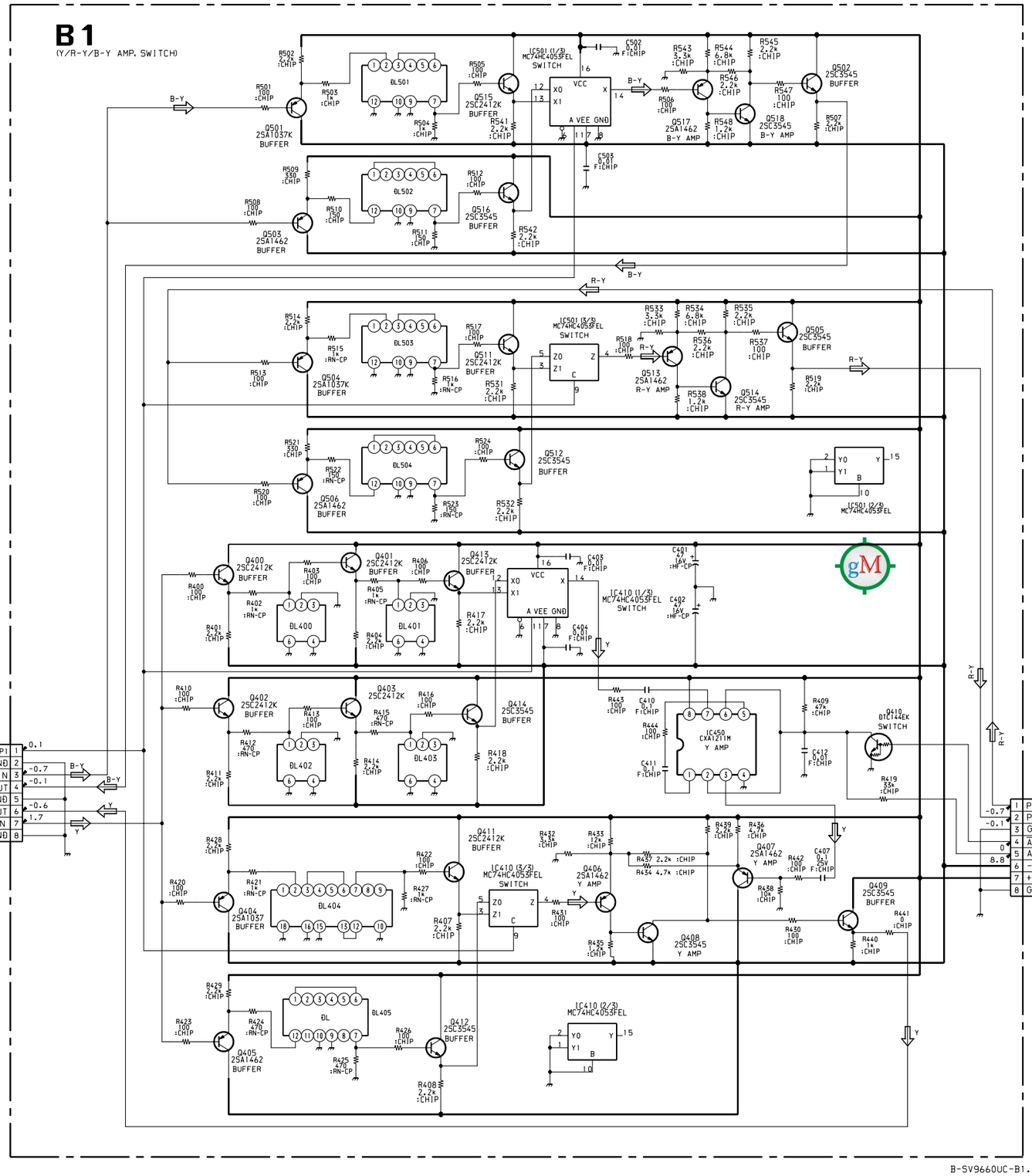


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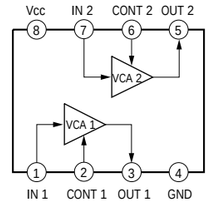


B BOARD WAVEFORMS

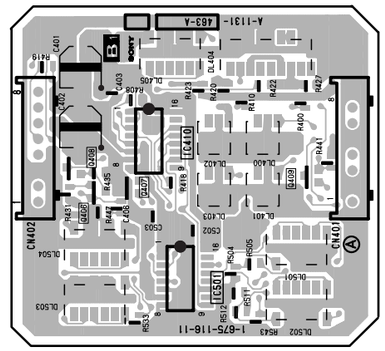
①  1.1Vp-p (H)	②  0.6Vp-p (H)	③  0.6Vp-p (H)	④  4.8Vp-p (H)	⑤  0.98Vp-p (H)
⑥  0.50Vp-p (H)	⑦  0.52Vp-p (H)	⑧  0.90Vp-p (H)	⑨  0.80Vp-p (H)	⑩  0.80Vp-p (H)
⑪  1.5Vp-p (H)	⑫  1.5Vp-p (H)	⑬  1.6Vp-p (H)	⑭  4.8Vp-p (H)	⑮  4.6Vp-p (H)
⑯  4.6Vp-p (H)	⑰  4.2Vp-p (V)	⑱  4.2Vp-p (H)	⑲  4.2Vp-p (H)	⑳  4.2Vp-p (H)
㉑  0.55Vp-p (V)	㉒  0.90Vp-p (H)	㉓  0.80Vp-p (H)	㉔  0.38Vp-p (V)	㉕  0.79Vp-p (H)
㉖  0.38Vp-p (H)	㉗  0.96Vp-p (V)	㉘  0.51Vp-p (H)	㉙  0.51Vp-p (H)	㉚  1.2Vp-p (H)
㉛  0.65Vp-p (H)	㉜  0.63Vp-p (H)	㉝  4.8Vp-p (H)	㉞  3.4Vp-p (V)	㉟  2.6Vp-p (H)
㊱ 1.9Vp-p (H)	㊲ 1.9Vp-p (H)	㊳ 2.4Vp-p (H)	㊴ 1.7Vp-p (H)	㊵ 1.8Vp-p (H)
㊶ 2.4Vp-p (H)	㊷ 1.8Vp-p (H)	㊸ 1.7Vp-p (H)	㊹ 50Vp-p (H)	㊺ 33Vp-p (H)
㊻ 32Vp-p (H)	㊼ 2.5Vp-p (H)	㊽ 1.8Vp-p (H)	㊾ 1.9Vp-p (H)	



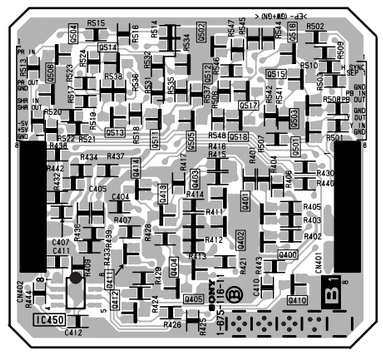
CXA1211M (IC450)



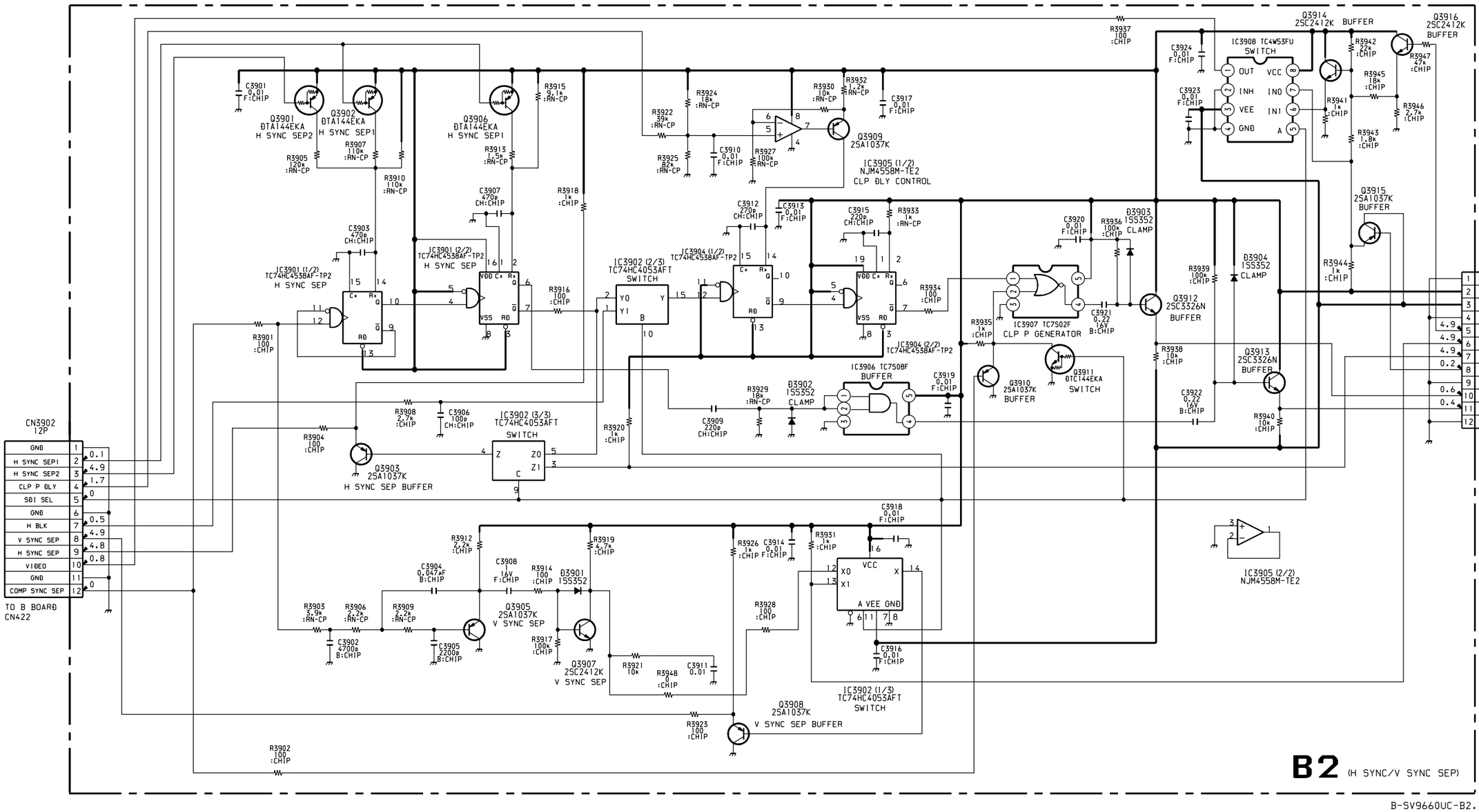
B1 BOARD



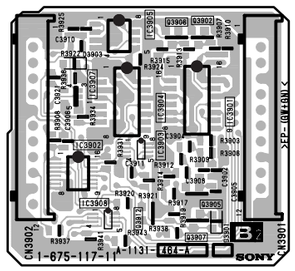
B1 –A SIDE–
SUFFIX: -11



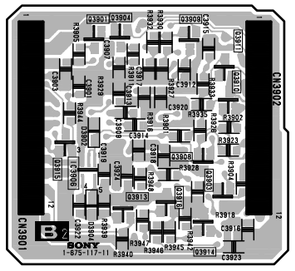
B1 –B SIDE–
SUFFIX: -11



B2 BOARD

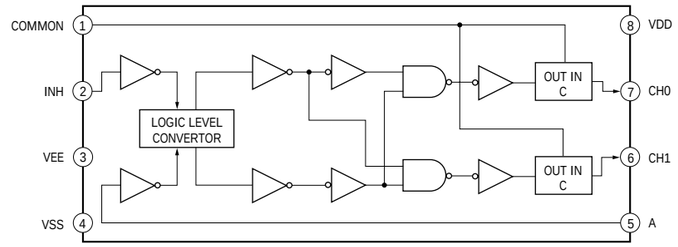


B2 –A SIDE–
SUFFIX: -11



B2 –B SIDE–
SUFFIX: -11

TC4W53FU (IC3908)

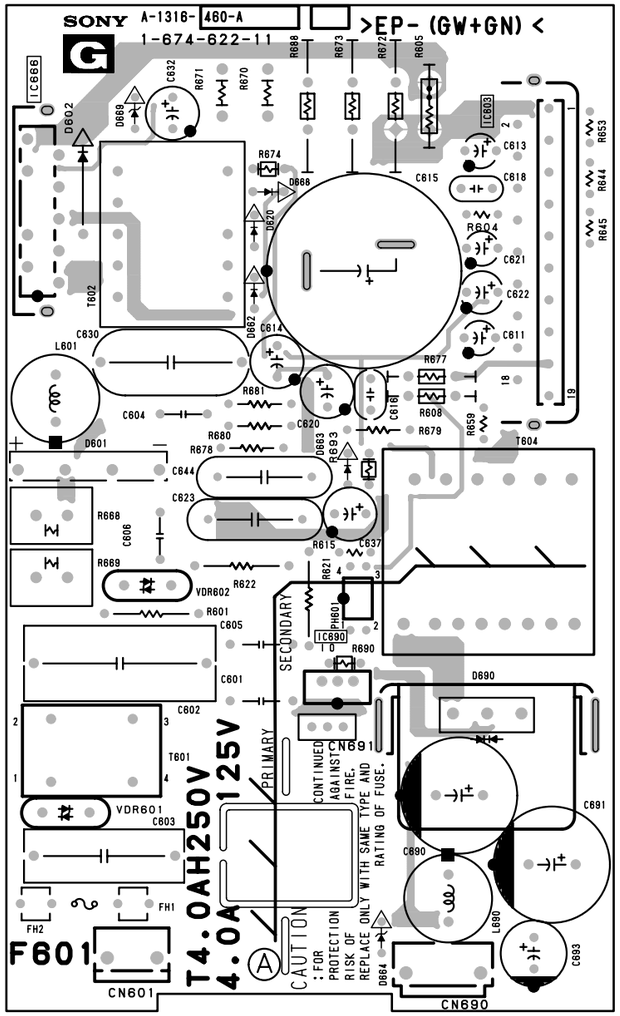


G BOARD

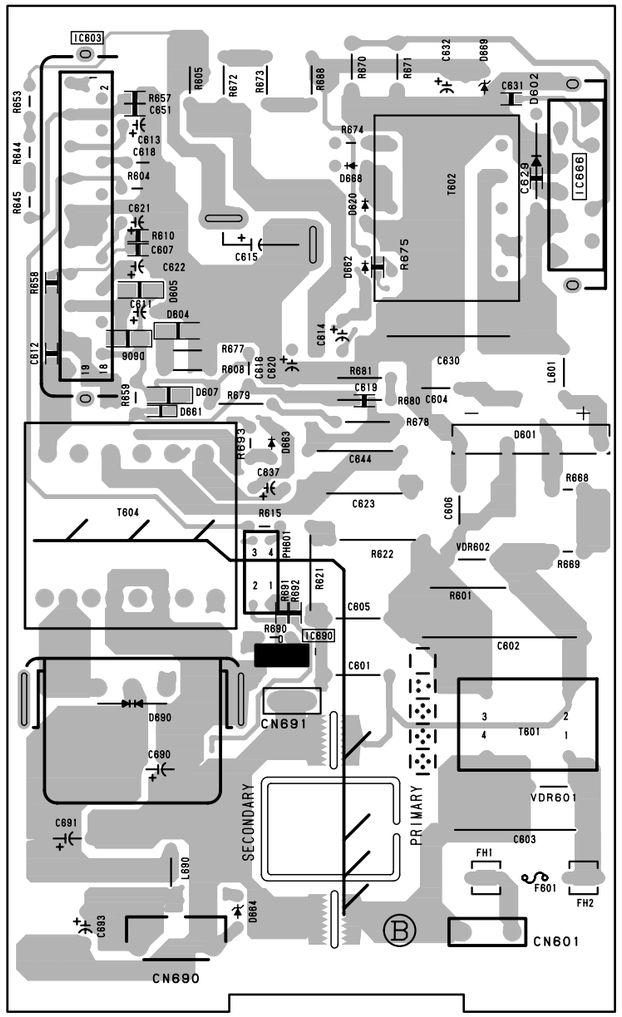
* : B-SIDE

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D2502	G-7	IC507	C-1	Q2518	G-5
D2503	F-6	IC508	C-2	Q2519	* G-5
D2504	J-5	IC509	B-2	Q501	B-1
D2506	G-7	IC510	E-1	Q504	E-2
D2507	H-6	IC512	E-1	Q505	* F-1
D2508	E-7	IC514	K-2	Q506	* J-4
D2509	E-7	IC515	E-1	Q507	* K-4
D2510	H-7	IC516	D-1	Q508	* F-1
D2511	H-7	IC517	K-1	Q509	* F-1
D2512	J-6	IC519	F-2	Q510	F-1
D2513	K-5	IC520	* G-2	Q511	F-1
D2514	H-5	IC522	B-1	Q512	F-1
D2515	* E-6	IC523	* J-2	Q513	K-4
D2520	* J-5	IC524	B-2	Q514	H-4
D501	* E-2	IC526	B-1	Q517	G-3
D502	* E-2	IC527	B-2	Q518	G-3
D503	* E-2	IC528	D-1	Q520	* C-1
D504	* E-2	IC529	A-2	Q521	* D-2
D505	E-2	IC601	D-7	Q523	E-2
D506	* J-3	IC602	C-5	Q524	* C-1
D507	* J-2	IC606	F-3	Q525	* D-1
D508	* J-2	IC607	F-3	Q529	B-2
D509	* J-2	IC608	D-3	Q530	B-2
D510	* J-2	IC609	E-2	Q531	B-2
D511	* J-2	IC610	D-3	Q532	* E-1
D512	* J-2			Q533	* F-2
D513	J-3	Q2501	G-6	Q534	* E-1
D514	* K-4	Q2502	G-6	Q535	* C-1
D515	* F-1	Q2503	G-7	Q536	B-2
D516	H-4	Q2504	E-6	Q601	* A-2
D517	* F-2	Q2505	G-6	Q602	C-4
D518	J-4	Q2508	J-7	Q603	* C-3
D519	J-4	Q2511	J-5	Q604	* C-3
D520	H-3	Q2513	J-5	Q605	D-4
D524	G-2	Q2514	G-5	Q608	D-4
D525	* G-3	Q2515	* G-5	Q609	* D-4
D529	* C-1	Q2518	G-5	Q611	* F-2
D530	E-1	Q2519	* G-5	Q612	* F-2
D531	* C-2	Q501	B-1	Q613	* F-2
D532	* C-2	Q504	E-2	Q614	G-4
D533	* B-2	Q505	* F-1	Q615	* D-3
D534	* D-1	Q506	* J-4	Q616	* F-2
D535	* F-2	Q507	* K-4	Q617	* F-2
D536	* C-1	Q508	* F-1	Q618	* D-2
D537	* F-2	Q509	* F-1	Q619	* A-2
D538	* C-1	Q510	F-1	Q620	* F-2
D539	* C-2	Q511	F-1	Q621	* F-2
D540	* B-1	Q512	F-1	Q622	* E-2
D601	* B-3	Q513	K-4		
D602	B-4	Q514	H-4		
D603	* C-3	Q517	G-3		
D604	C-3	Q518	G-3		
D605	C-4	Q520	* C-1		
D607	* C-4	Q521	* D-2		
D608	D-7	Q523	E-2		
D609	* D-4	Q524	* C-1		
D612	* C-4	Q525	* D-1		
D614	* D-5	Q529	B-2		
D617	* D-5	Q530	B-2		
D619	* D-4	Q531	B-2		
D620	* D-4	Q532	* E-1		
D622	F-5	Q533	* F-2		
D623	F-5	Q534	* E-1		
D624	G-4	Q535	* C-1		
D625	D-3	Q536	B-2		
D626	F-4	Q601	* A-2		
D627	F-2	Q602	C-4		
D633	* C-3	Q603	* C-3		
D634	A-2	Q604	* C-3		
D635	C-6	Q605	D-4		
D636	* D-5	Q608	D-4		
D637	F-4	Q609	* D-4		
D638	* E-2	Q611	* F-2		
D639	* F-2	Q612	* F-2		
D640	* F-2	Q613	* F-2		
		Q614	G-4		
IC2501	* F-6	Q615	* D-3		
IC2502	* E-6	Q616	* F-2		
IC2503	K-5	Q617	* F-2		
IC2504	E-6	Q618	* D-2		
IC501	B-1	Q619	* A-2		
IC502	D-1	Q620	* F-2		
IC503	B-1	Q621	* F-2		
		Q622	* E-2		

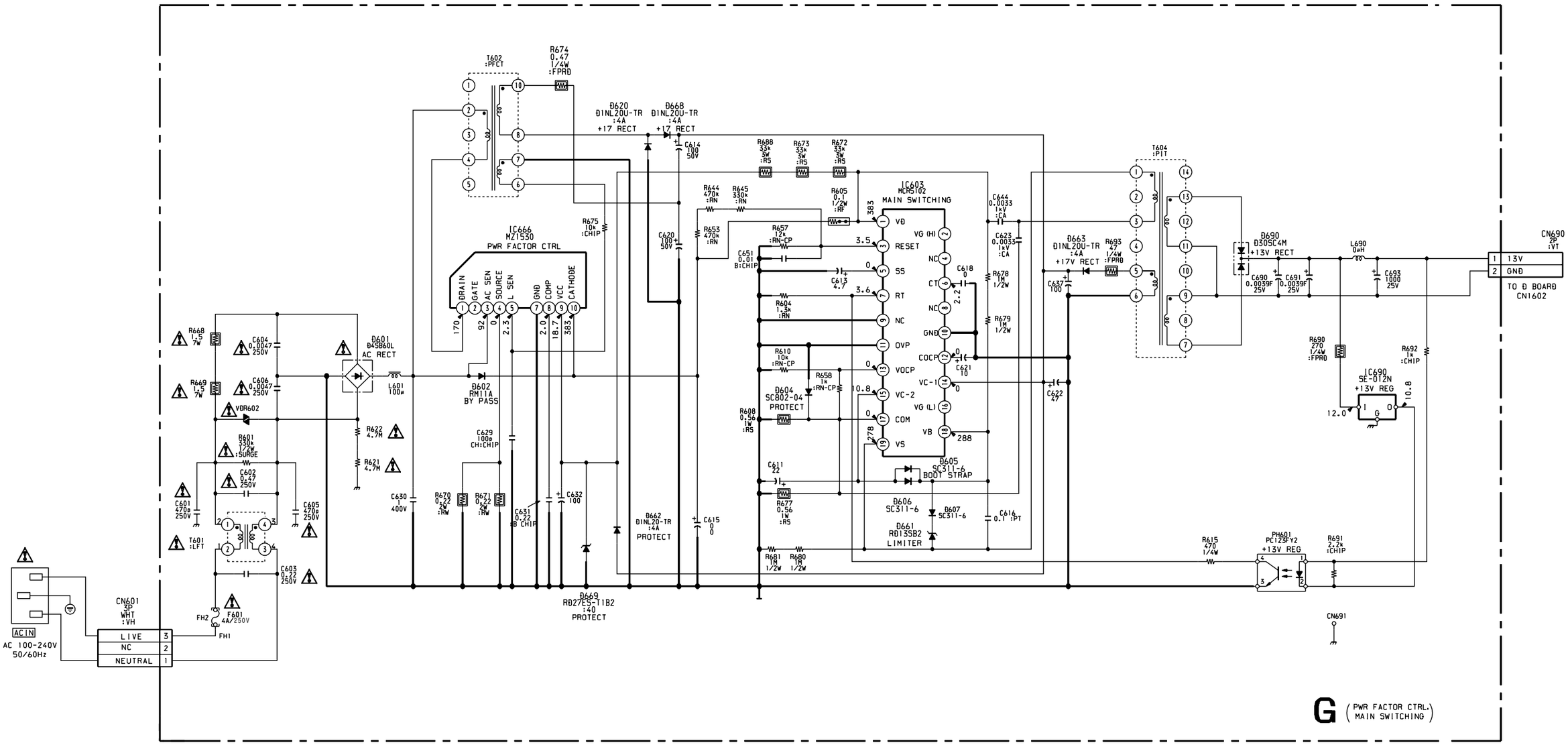
G BOARD



G –A SIDE–
SUFFIX: -11

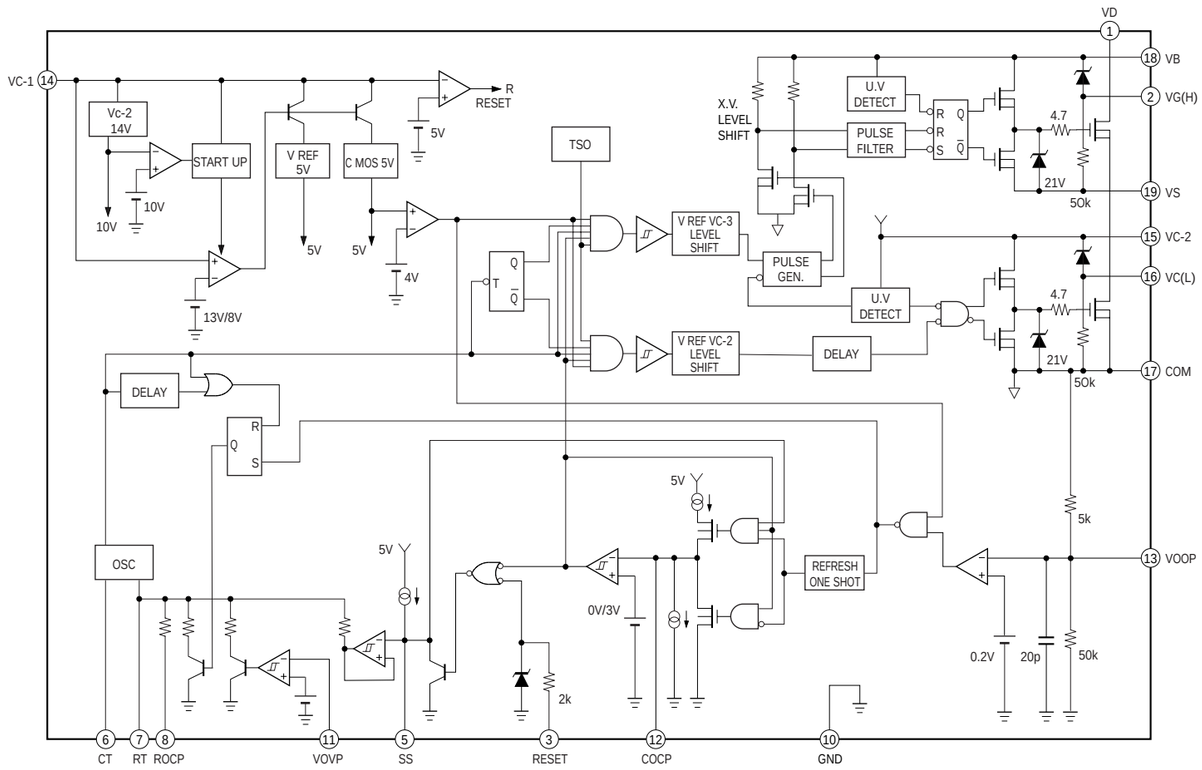


G –B SIDE–
SUFFIX: -11

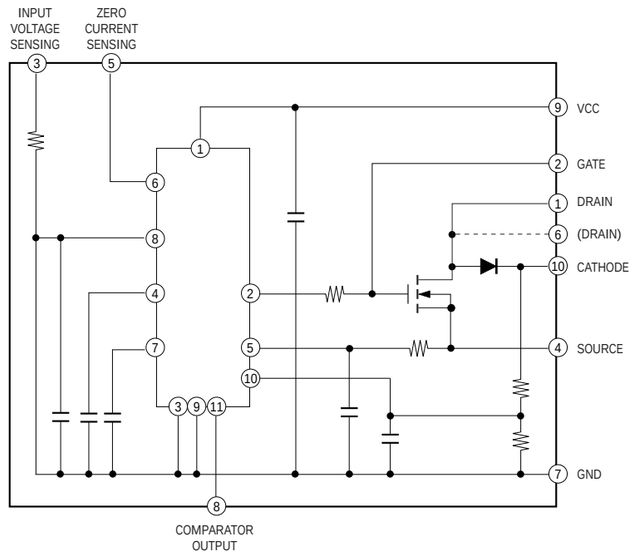

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R674 0.47 1/4W :FPRD
D620 DINL20U-TR :4A +17 RECT
D668 DINL20U-TR :4A +17 RECT
C614 100 50V
R688 33k 3W :RS
R673 33k 3W :RS
R672 33k 3W :RS
IC603 MCR5102 MAIN SWITCHING
R644 470k :RN
R645 330k :RN
R605 0.1 1/2W :RF
R675 10k :CHIP
C620 100 50V
R653 470k :RN
IC666 MZ1530 PWR FACTOR CTRL
DRAIN GATE AC SEN SOURCE L SEN GND COMP VCC CATHODE
R657 12k :RN-CP
C651 0.01 B:CHIP
C613 4.7
R604 1.5k :RN
VD VG (H) RESET SS RT NC OVP VOCP VC-2 VG (L) COM VB VS
C644 0.0033 1kV :CA
C623 0.0033 1kV :CA
C618 0
C637 100
R678 1M 1/2W
R679 1M 1/2W
T604 :PIT
D663 DINL20U-TR :4A +17V RECT
R693 47 1/4W :FPRD
D690 D30SC4M +13V RECT
C690 0.0039F 25V
C691 0.0039F 25V
L690 0uH
C693 1000 25V
CN690 2P :VT
1 13V
2 GND
TO D BOARD CN1602
R690 270 1/4W :FPRD
R692 1k :CHIP
IC690 SE-012N +13V REG
R610 10k :RN-CP
R658 1k :RN-CP
D604 SC802-04 PROTECT
C621 10
C622 47
R608 0.56 1W :RS
C611 22
D605 SC311-6 BOOT STRAP
D606 SC311-6
D607 SC311-6
D661 RD13SB2 LIMITER
R677 0.56 1W :RS
C616 0.1 :PT
R681 1M 1/2W
R680 1M 1/2W
R615 470 1/4W
PH601 PC123Y2 +13V REG
R691 2.2k :CHIP
CN691
D601 D4SB60L AC RECT
L601 100u
R668 1.5 7W
R669 1.5 7W
C604 0.0047 250V
C606 0.0047 250V
VDR602
R601 330k 1/2W :SURGE
C602 0.47 250V
C601 470p 250V
T601 :LFT
C605 470p 250V
C603 0.22 250V
R622 4.7M
R621 4.7M
C630 1 400V
R670 0.22 2W :RW
R671 0.22 2W :RW
C629 100p CH:CHIP
C631 0.22 B CHIP
C632 100
D602 RM11A BY PASS
D662 DINL20-TR :4A PROTECT
C615 0 0
D669 RD27ES-T1B2 :40 PROTECT
FH2
F601 4A/250V
FH1
CN601 3P WHT :VH
LIVE 3
NC 2
NEUTRAL 1
ACIN
AC 100-240V 50/60Hz
G (PWR FACTOR CTRL. MAIN SWITCHING)

B-SV9660UC-G..

MCR5102 (IC603)

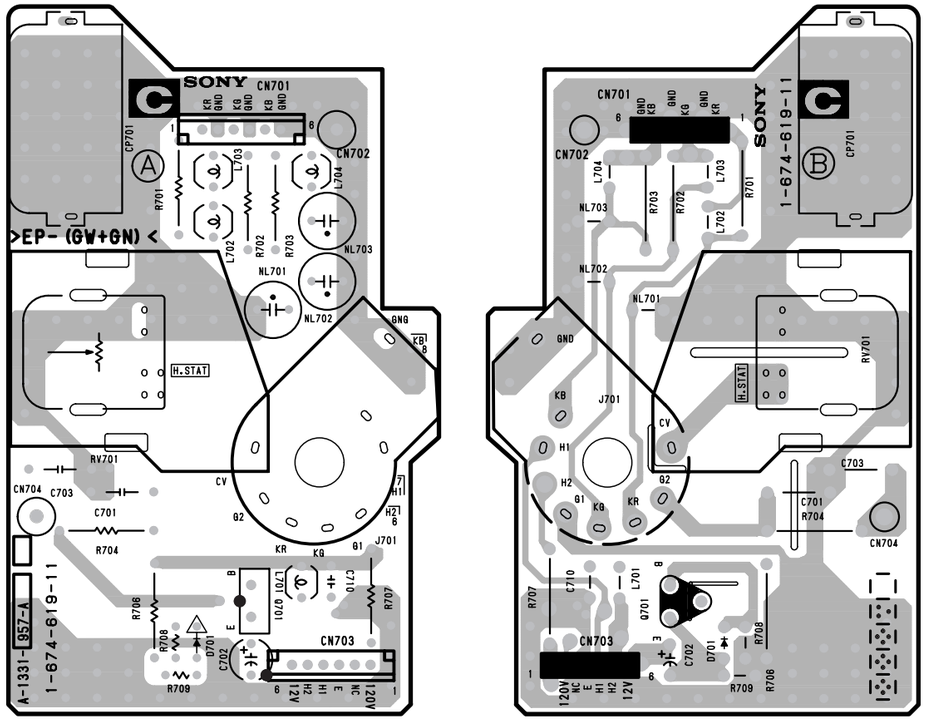


MZ1530 (IC666)



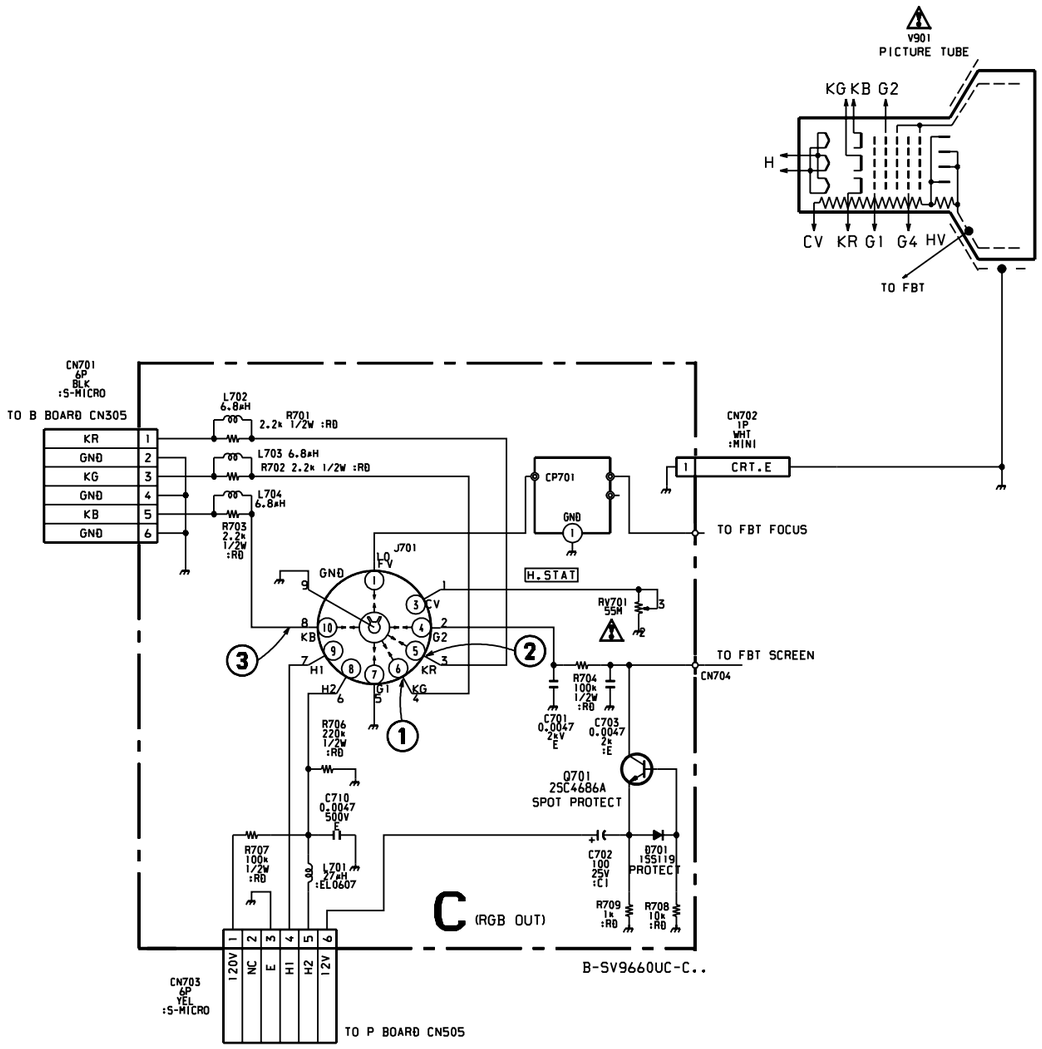
http://getMANUAL.com

C BOARD

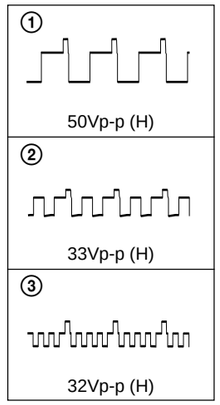


C –A SIDE–
SUFFIX: -11

C –B SIDE–
SUFFIX: -11



C BOARD WAVEFORMS

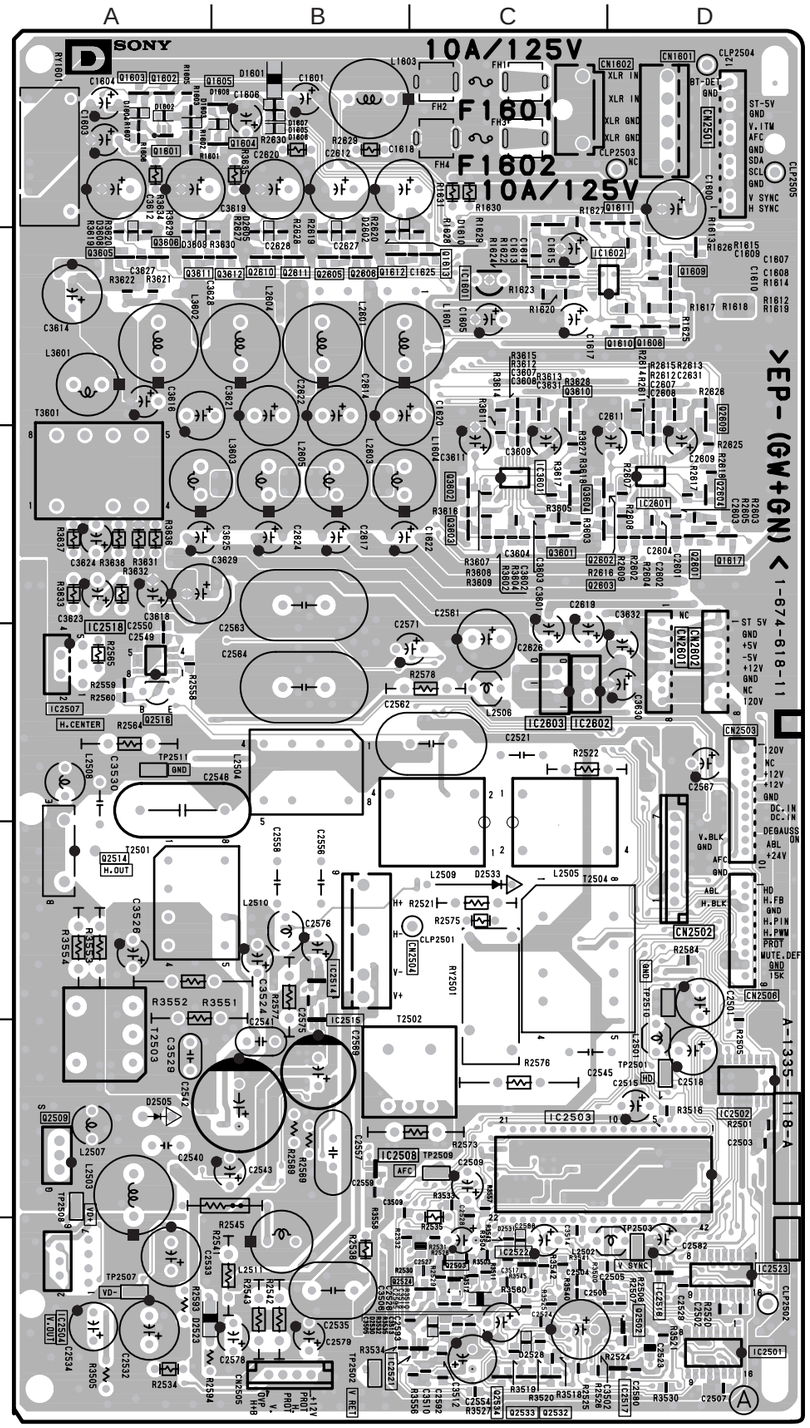


D BOARD

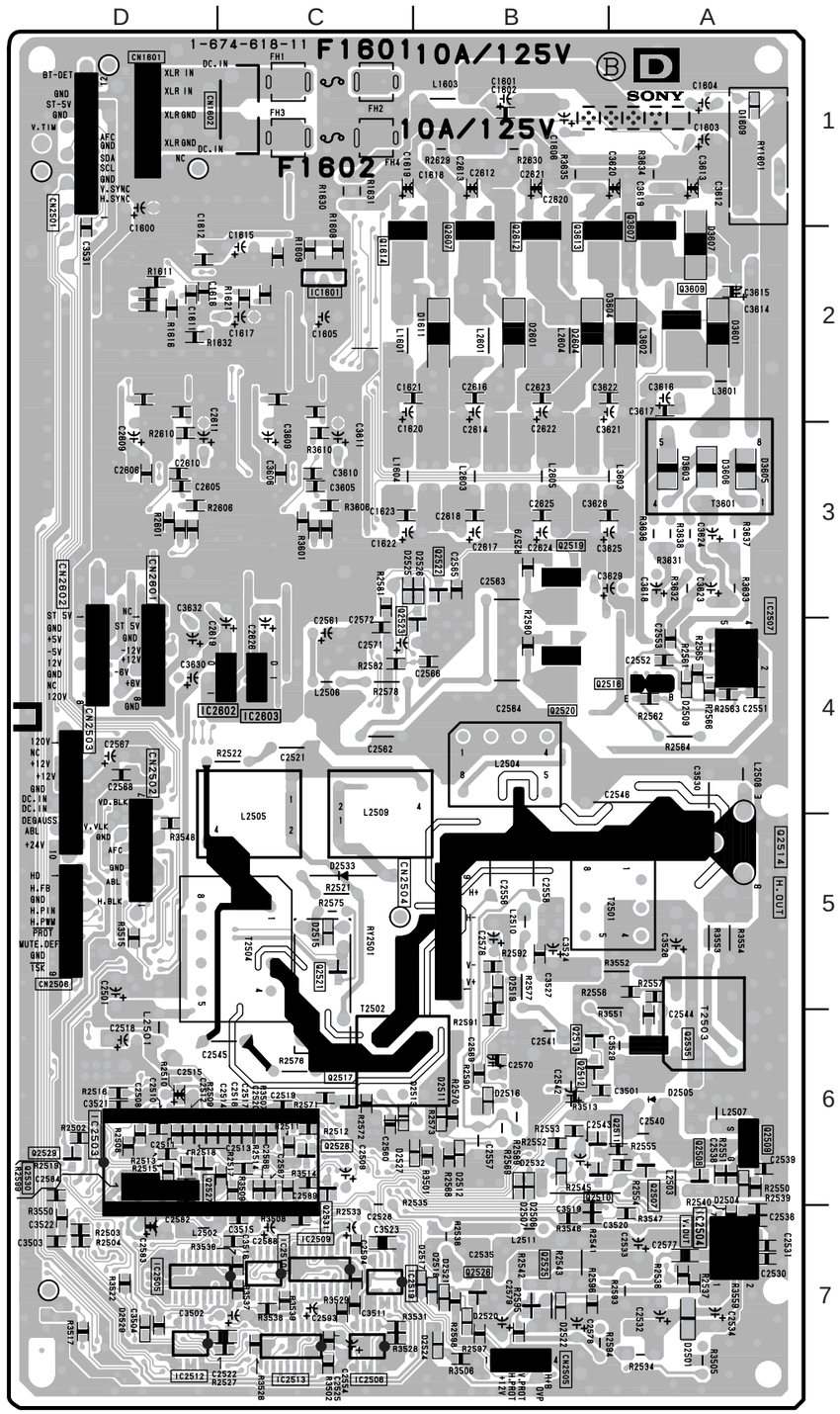
*: B SIDE

D1601	B-1	Q1601	A-1
D1602	A-1	Q1602	A-1
D1603	A-1	Q1603	A-1
D1604	A-1	Q1604	B-1
D1605	B-1	Q1605	B-1
D1606	B-1	Q1608	2-D
D1607	A-1	Q1609	2-D
D1608	A-1	Q1610	2-D
D1609	* A-1	Q1611	C-1
D1610	C-1	Q1612	B-2
D1611	* B-2	Q1613	C-2
D2501	* A-7	Q1614	* C-2
D2504	* A-6	Q1617	D-3
D2505	A-6	Q2502	* A-7
D2506	* B-6	Q2503	C-7
D2507	* B-6	Q2507	* A-6
D2509	* A-4	Q2508	* A-6
D2511	* B-6	Q2509	A-6
D2512	* B-6	Q2510	* B-6
D2513	* C-6	Q2511	* A-6
D2515	* C-5	Q2512	* B-6
D2516	* B-6	Q2513	* B-6
D2517	* B-7	Q2514	A-5
D2518	* B-7	Q2516	A-4
D2519	* B-5	Q2517	* C-6
D2520	* B-7	Q2519	* B-3
D2521	* B-7	Q2520	* B-4
D2522	* B-7	Q2521	* C-5
D2523	A-7	Q2522	* B-3
D2524	* B-7	Q2523	* C-3
D2525	* C-3	Q2524	B-7
D2526	* B-3	Q2525	* B-7
D2527	* C-6	Q2526	* B-7
D2528	C-7	Q2527	* D-6
D2529	* D-7	Q2528	* C-6
D2530	* B-7	Q2529	* D-6
D2532	* B-6	Q2530	* D-6
D2533	C-5	Q2531	* C-7
D2601	* B-2	Q2532	C-7
D2602	B-1	Q2533	C-7
D2604	* B-2	Q2534	C-7
D2605	B-1	Q2535	* A-6
D3601	* A-2	Q2601	D-3
D3603	* A-3	Q2602	C-3
D3604	* A-2	Q2603	C-3
D3605	* A-3	Q2604	D-3
D3606	* A-3	Q2605	B-2
D3607	* A-2	Q2606	B-2
D3608	A-2	Q2607	* B-1
D3609	A-2	Q2609	D-2
		Q2610	B-2
IC1601	C-2	Q2611	B-2
IC1602	C-2	Q2612	* B-1
IC2501	D-7	Q3601	C-3
IC2502	D-6	Q3602	C-3
IC2503	C-6	Q3603	C-3
IC2504	A-7	Q3604	C-3
IC2505	* D-7	Q3605	A-2
IC2506	* C-7	Q3606	A-2
IC2507	A-4	Q3607	* A-1
IC2508	B-6	Q3609	* A-2
IC2509	* C-7	Q3610	C-2
IC2510	* C-7	Q3611	A-2
IC2512	* D-7	Q3612	B-2
IC2513	* C-7	Q3613	* B-1
IC2514	B-5		
IC2515	B-5		
IC2516	D-7		
IC2517	D-7		
IC2518	A-4		
IC2519	* C-7		
IC2521	B-7		
IC2522	C-7		
IC2523	D-7		
IC2601	D-3		
IC2602	C-4		
IC2603	C-4		
IC3601	C-3		

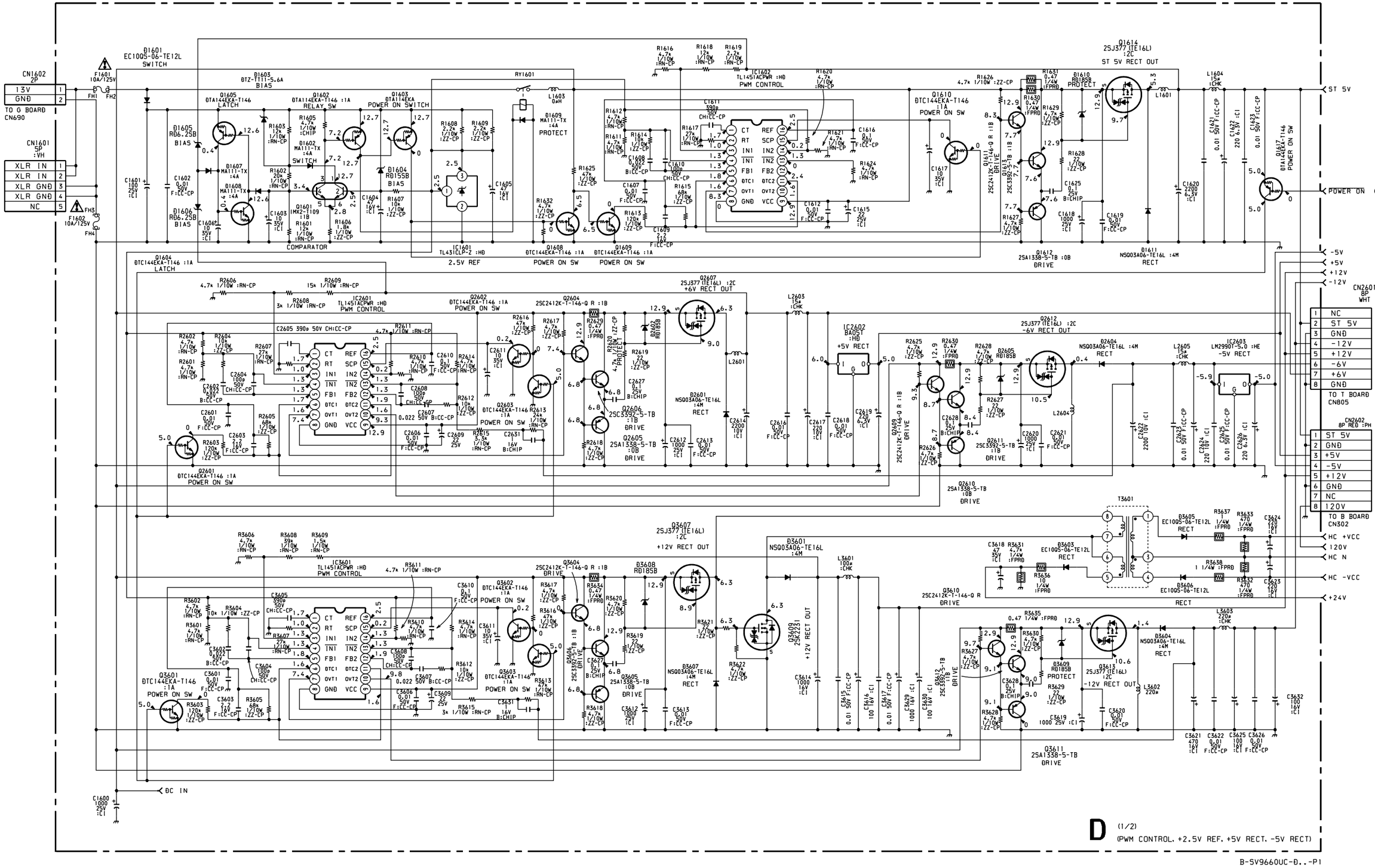
D BOARD

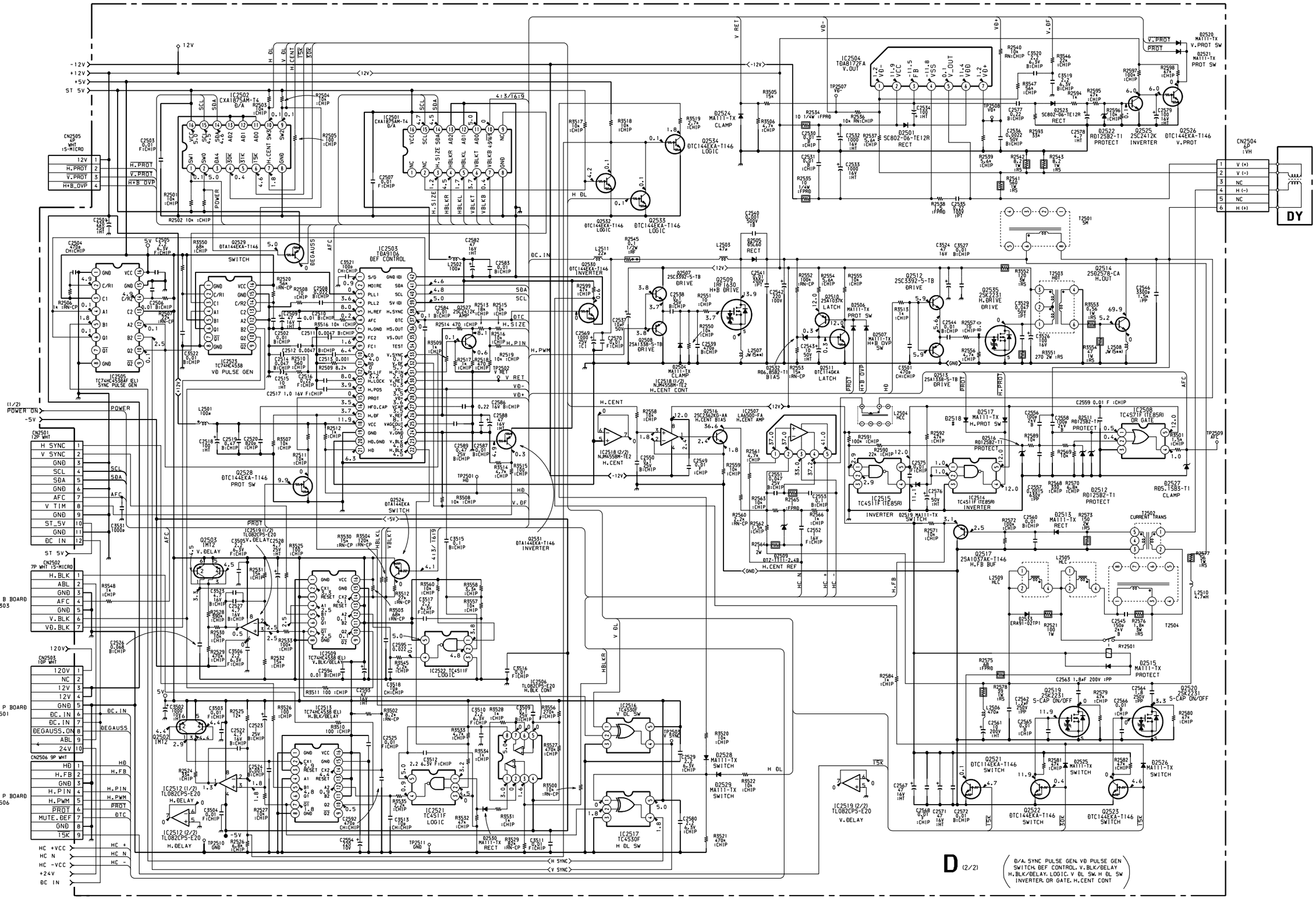


D –A SIDE–
SUFFIX: -11



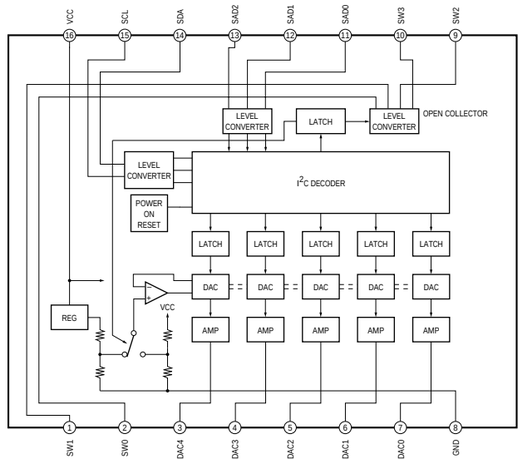
D –B SIDE–
SUFFIX: -11


CN1602 2P
13V
GNÐ
TO G BOARD CN690
CN1601 5P :VH
XLR IN
XLR IN
XLR GNÐ
XLR GNÐ
NC
Q1601 EC1005-06-TE12L SWITCH
RY1601
IC1602 TL1451ACPWR :HD PWM CONTROL
IC1601 TL431CLP-Z :HD 2.5V REF
COMPARATOR
Q1610 DTC144EKA-T146 :1A POWER ON SW
Q1614 2SJ377(TE16L) :2C ST 5V RECT OUT
Q1612 2SA1358-5-TB :0B DRIVE
Q1611 NSQ03A06-TE16L :4M RECT
ST 5V
POWER ON (2/2)
-5V
+5V
+12V
-12V
CN2601 8P WHT
NC
ST 5V
GNÐ
-12V
+5V
-6V
+6V
GNÐ
TO T BOARD CN805
CN2602 8P RED :PH
ST 5V
GNÐ
+5V
-5V
+12V
GNÐ
NC
120V
TO B BOARD CN302
Q2607 2SJ377(TE16L) :2C +6V RECT OUT
IC2602 BA05T :HD +5V RECT
Q2612 2SJ377(TE16L) :2C -6V RECT OUT
IC2603 LM29901-5.0 :HE -5V RECT
Q2601 DTC144EKA-T146 :1A POWER ON SW
Q2610 2SA1358-5-TB :0B DRIVE
Q2611 2SC3392-5-TB :1B DRIVE
T3601
Q3607 2SJ377(TE16L) :2C +12V RECT OUT
Q3611 2SA1358-5-TB DRIVE
HC +VCC
120V
HC N
HC -VCC
+24V
DC IN
D (1/2)
(PWM CONTROL, +2.5V REF, +5V RECT, -5V RECT)
B-SV9660UC-D..-P1

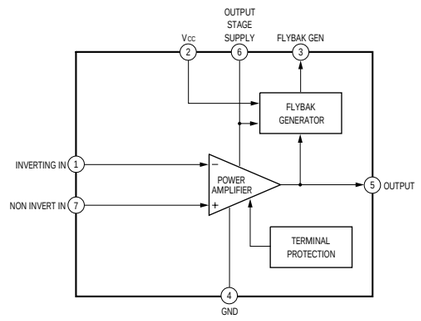


B-SV9660UC-Ø..-P2

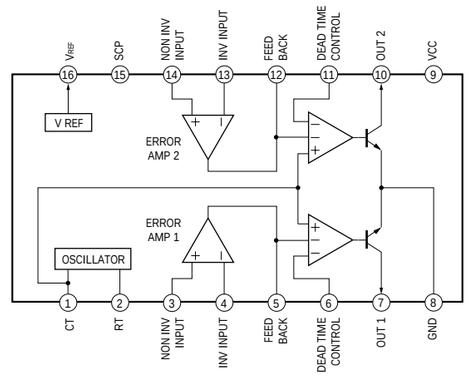
CXA1875AM-T4 (IC2501, 2502)



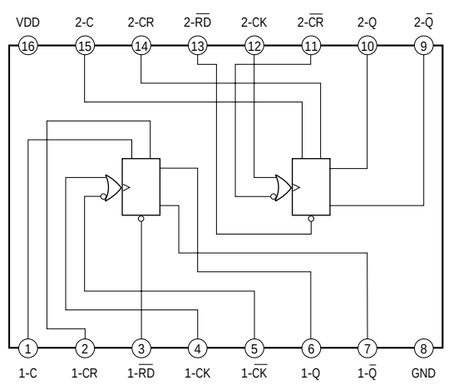
TDA8172FA (IC2504)



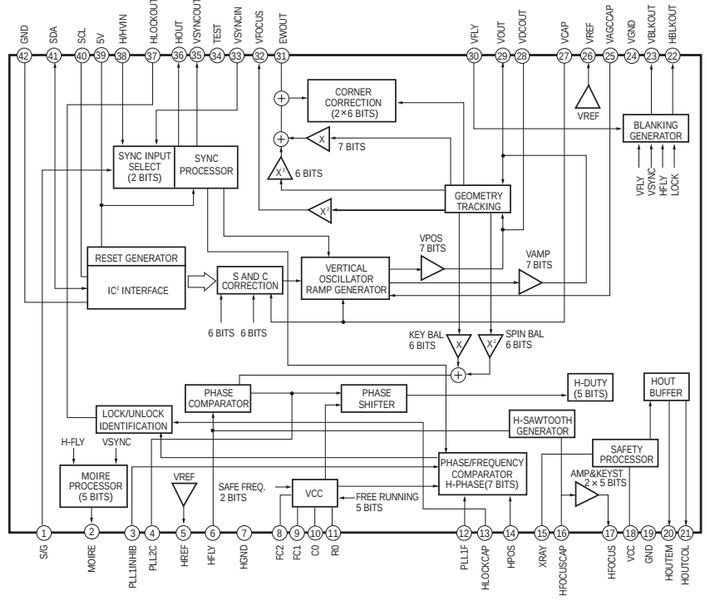
TL1451ACPWR (IC1602, 2601, 3601)



TC74HC4538AF(EL) (IC2505, 2509, 2513, 2523)



TDA9106 (IC2503)

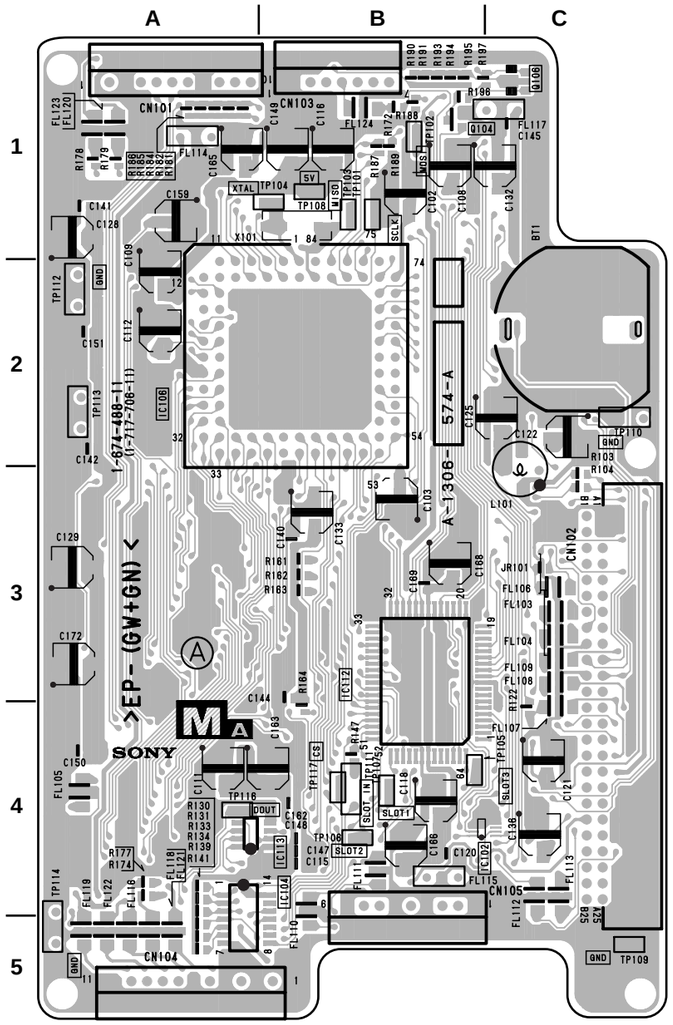


[MA BOARD]

* : B SIDE

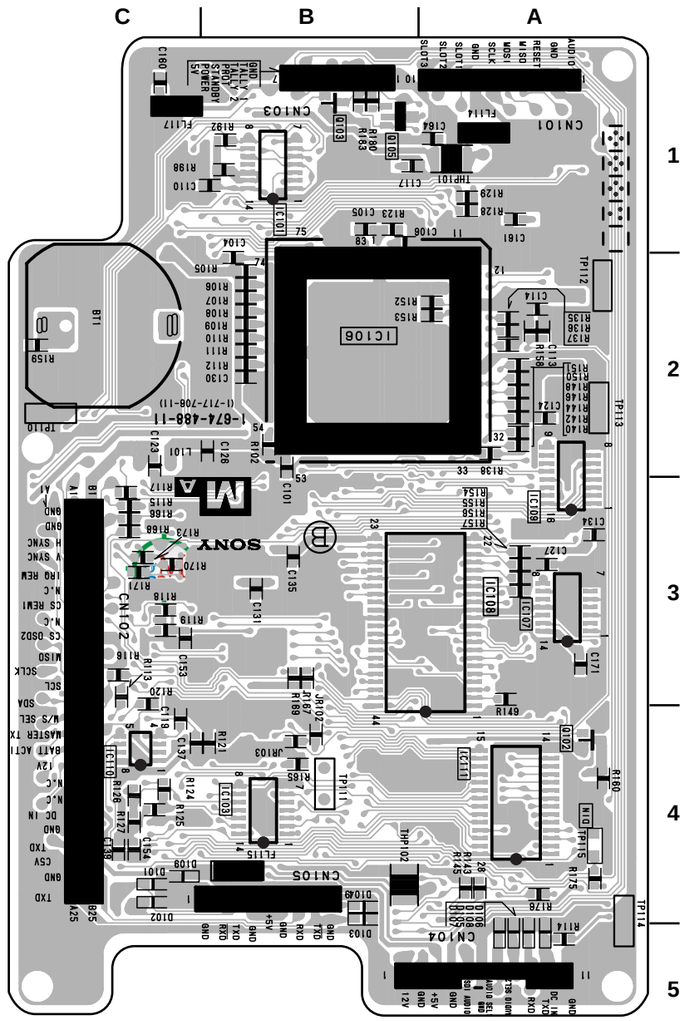
D101	*	C-4
D102	*	C-4
D103	*	B-4
D104	*	B-4
D105	*	A-5
D106	*	A-5
D107	*	A-5
D108	*	A-5
D109	*	C-4
IC101	*	B-1
IC102		C-4
IC103	*	B-4
IC104	*	A-4
IC106		B-2
IC107	*	A-3
IC108	*	A-3
IC109	*	A-3
IC110	*	C-3
IC111	*	A-4
IC112		B-3
IC113		A-4
Q102	*	A-4
Q103	*	B-1
Q104		C-1
Q105	*	B-1
Q106		C-1
TP101		B-1
TP102		B-1
TP103		B-1
TP104		B-1
TP105		B-4
TP106		B-4
TP107		B-4
TP108		B-1
TP109		C-5
TP110		C-2
TP111		B-4
TP112		A-2
TP113		A-2
TP114		A-5
TP115	*	A-5
TP116		A-4
TP117		B-4

MA BOARD



MA –A SIDE–

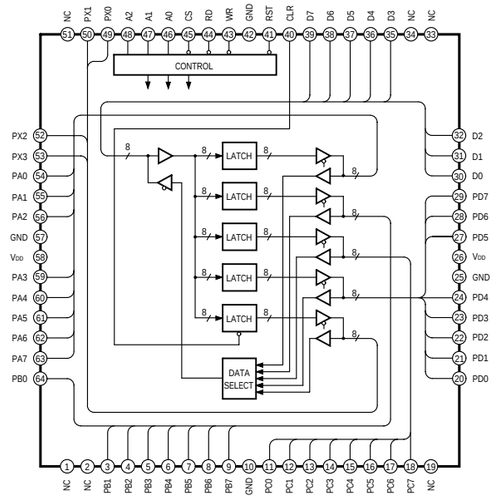
SUFFIX: -11



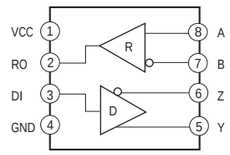
MA –B SIDE–

SUFFIX: -11

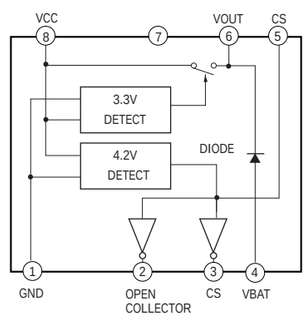
CXD1095BQ (IC112)

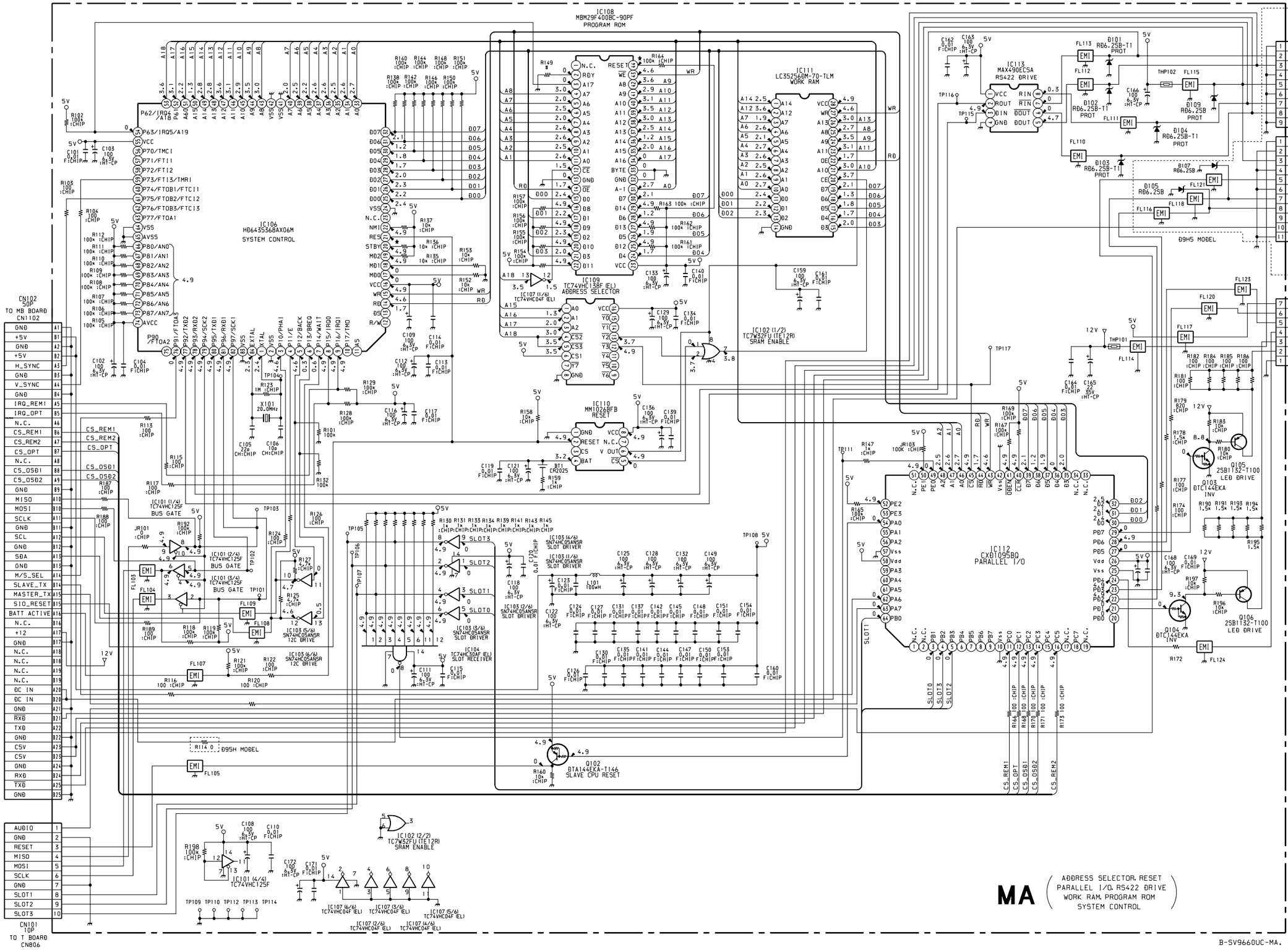


MAX490ECSA (IC113)



MM1026BFB (IC110)



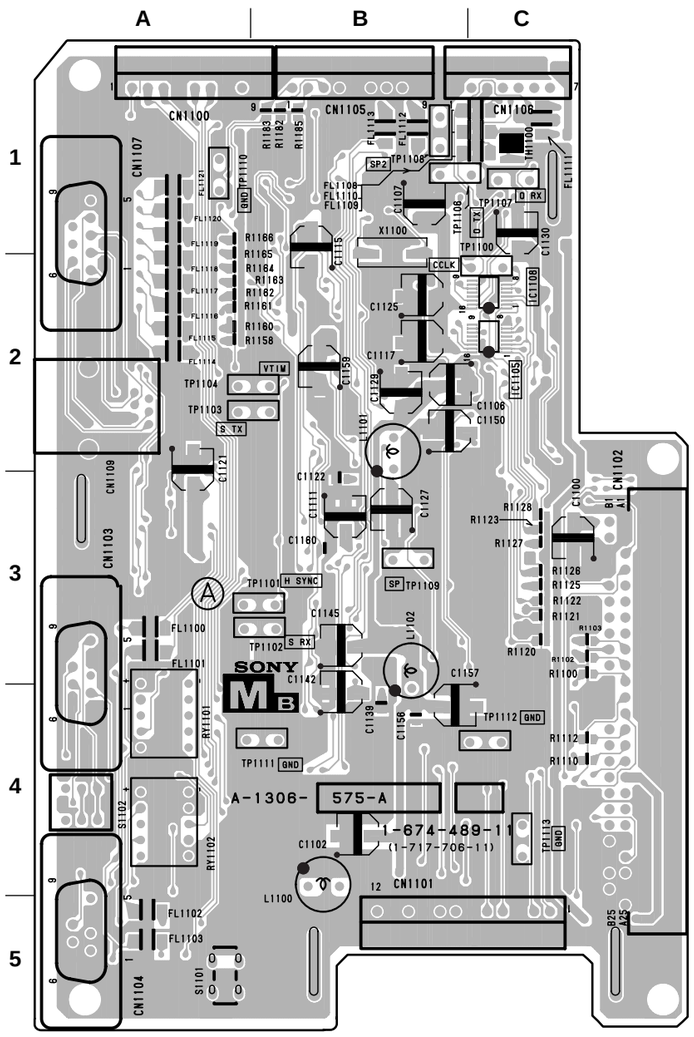

IC108
MBM29F400BC-90PF
PROGRAM ROM
IC106
HD6435368AX06M
SYSTEM CONTROL
IC111
LC352560M-70-TLM
WORK RAM
IC109
TC74VHC138F(EL)
ADDRESS SELECTOR
IC110
MM1026BFB
RESET
IC112
CXD1095BQ
PARALLEL I/O
IC113
MAX490ECSA
RS422 DRIVE
IC102 (1/2)
TC7W32FU(TE12R)
SRAM ENABLE
IC102 (2/2)
TC7W32FU(TE12R)
SRAM ENABLE
IC101 (1/4)
TC74VHC125F
BUS GATE
IC101 (2/4)
TC74VHC125F
BUS GATE
IC101 (3/4)
TC74VHC125F
BUS GATE
IC101 (4/4)
TC74VHC125F
IC103 (1/6)
SN74HC04ANSR
SLOT DRIVER
IC103 (2/6)
SN74HC05ANSR
SLOT DRIVER
IC103 (3/6)
SN74HC05ANSR
SLOT DRIVER
IC103 (4/6)
SN74HC05ANSR
SLOT DRIVER
IC103 (5/6)
SN74HC05ANSR
12C DRIVE
IC103 (6/6)
SN74HC05ANSR
12C DRIVE
IC104
TC74HC30AF(EL)
SLOT RECEIVER
IC107 (1/6)
TC74VHC04F(EL)
IC107 (2/6)
TC74VHC04F(EL)
IC107 (3/6)
TC74VHC04F(EL)
IC107 (4/6)
TC74VHC04F(EL)
IC107 (5/6)
TC74VHC04F(EL)
IC107 (6/6)
TC74VHC04F(EL)
CN102
50P
TO MB BOARD
CN1102
CN101
10P
TO T BOARD
CN806
CN105
9P
TO HC BOARD
CN2
CN104
11P
TO HD BOARD
CN3203
CN103
7P
RED:L
:S-MICRO
TO_LED
D9H5 MODEL
D95H MODEL
X101
20.0MHz
BT1
CR2025
Q101
2SB1132-T100
LED DRIVE
Q102
DTA144EKA-T146
SLAVE CPU RESET
Q103
DTC144EKA
INV
Q104
DTC144EKA
INV
Q105
2SB1132-T100
LED DRIVE
Q106
2SB1132-T100
LED DRIVE
D101
RB6.25B-T1
PROT
D102
RB6.25B-T1
PROT
D103
RB6.25B-T1
PROT
D104
RB6.25B-T1
PROT
D107
RB6.25B
D105
RB6.25B
THP101
THP102
TP101
TP102
TP103
TP104
TP105
TP106
TP107
TP108
TP109
TP110
TP111
TP112
TP113
TP114
TP115
TP116
TP117
JR101
JR103
100K :CHIP
FL101
FL102
FL103
FL104
FL105
FL106
FL107
FL108
FL109
FL110
FL111
FL112
FL113
FL114
FL115
FL116
FL117
FL118
FL120
FL121
FL123
FL124
SLOT0
SLOT1
SLOT2
SLOT3
CS_REM1
CS_REM2
CS_OPT
CS_OSD1
CS_OSD2
MA
ADDRESS SELECTOR, RESET
PARALLEL I/O, RS422 DRIVE
WORK RAM, PROGRAM ROM
SYSTEM CONTROL
B-SV9660UC-MA.

MB BOARD

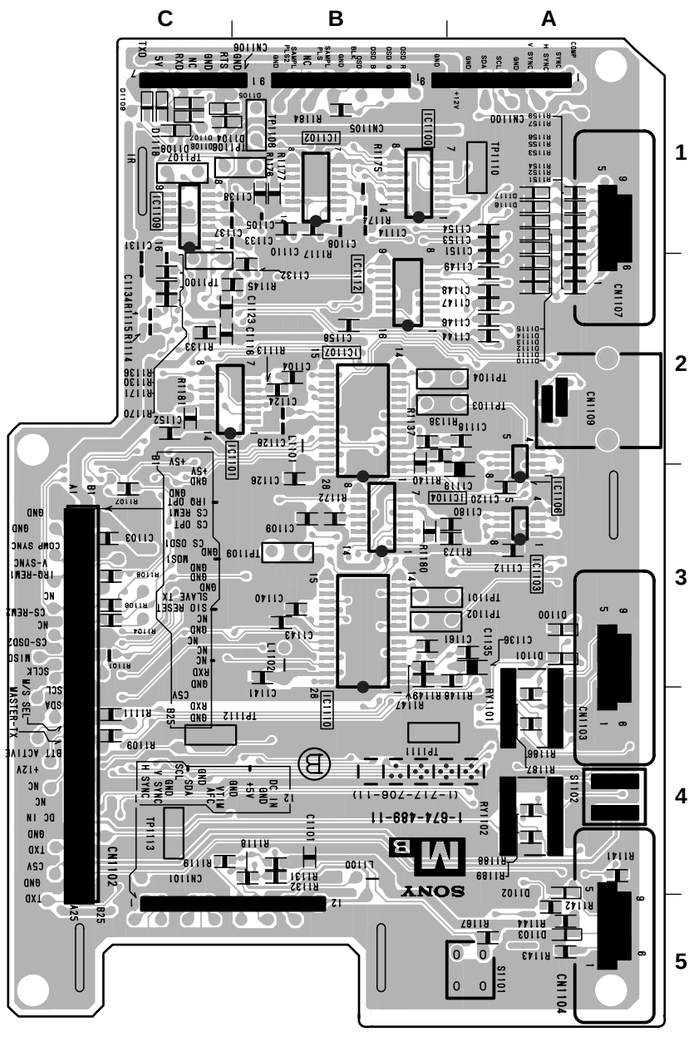
[MB BOARD]

* : B SIDE

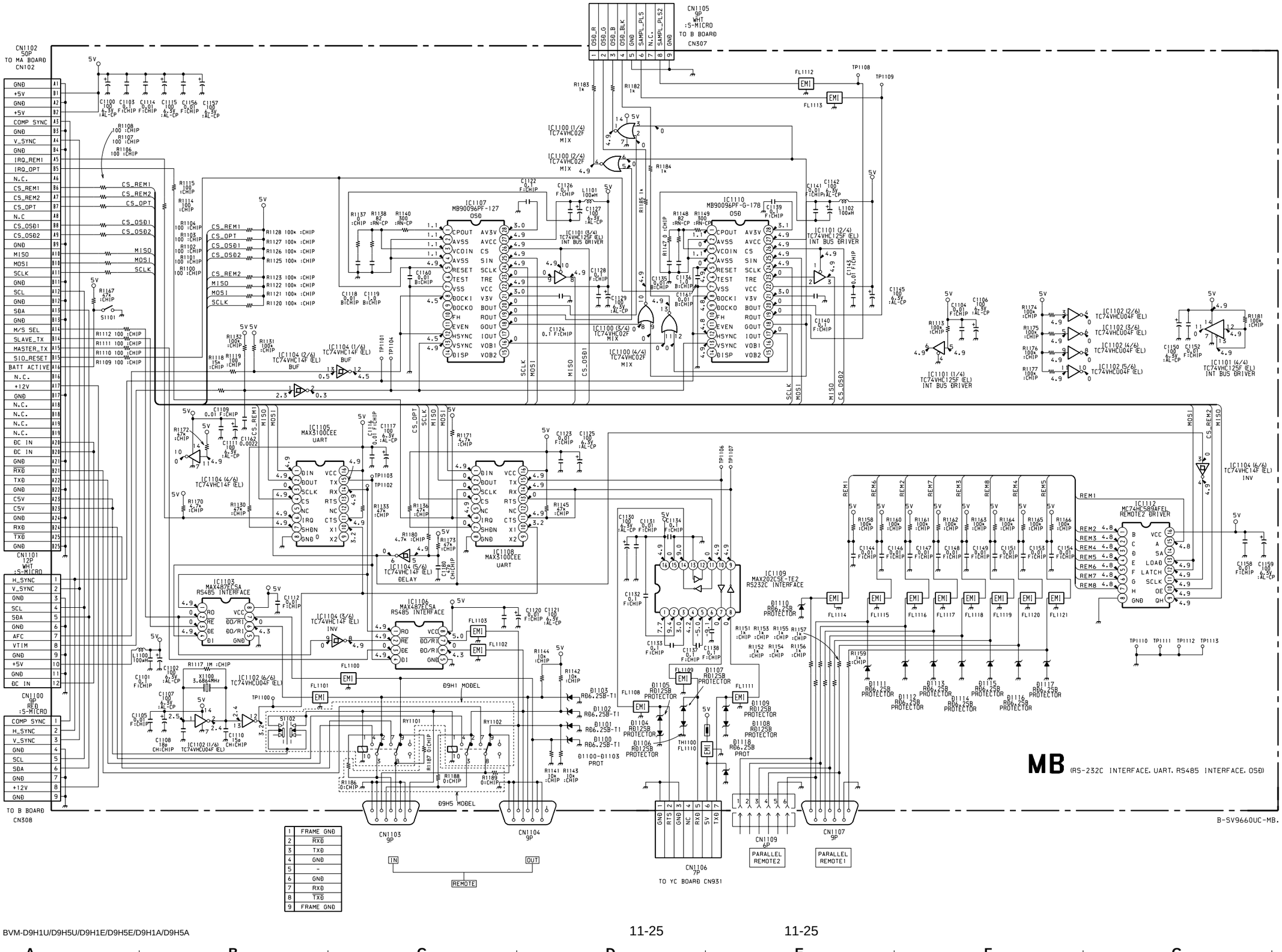
D1100	*	A-3
D1101	*	A-3
D1102	*	A-4
D1103	*	A-5
D1104	*	C-1
D1105	*	C-1
D1106	*	C-1
D1107	*	C-1
D1108	*	C-1
D1109	*	C-1
D1110	*	A-2
D1111	*	A-2
D1112	*	A-2
D1113	*	A-2
D1114	*	A-2
D1115	*	A-2
D1116	*	A-1
D1117	*	A-1
D1118	*	C-1
IC1100	*	B-1
IC1101	*	A-1
IC1102	*	B-1
IC1103	*	A-3
IC1104	*	B-3
IC1105		C-2
IC1106	*	A-2
IC1107	*	B-2
IC1108		C-2
IC1109	*	C-1
IC1110	*	B-3
IC1112	*	B-2
TP1100		C-2
TP1101		B-3
TP1102		B-3
TP1103		B-2
TP1104		B-2
TP1106		B-1
TP1107		C-1
TP1108		C-2
TP1109		B-3
TP1110		C-2
TP1111		B-4
TP1112		C-4
TP1113		C-4



MB –A SIDE–
SUFFIX: -11

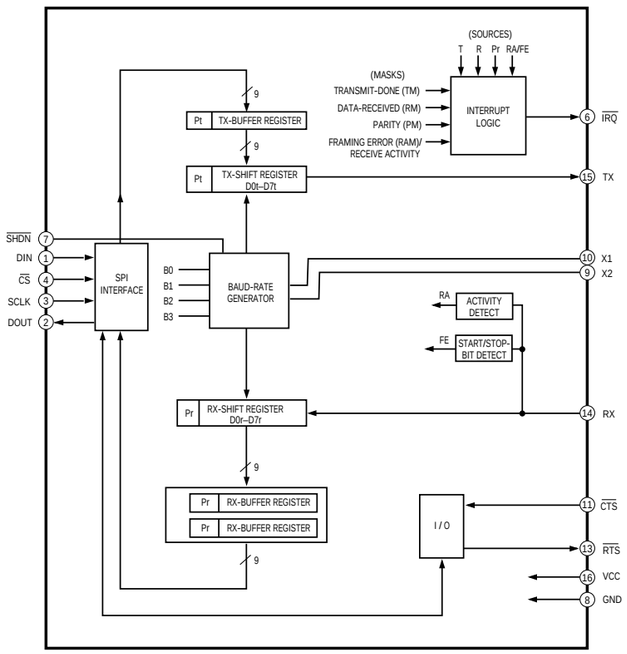


MB –B SIDE–
SUFFIX: -11

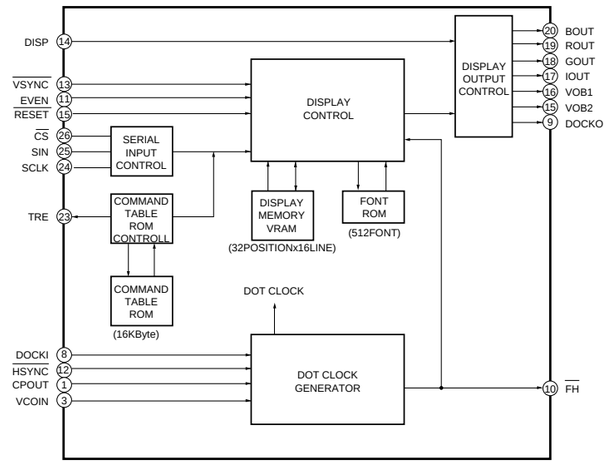


1	FRAME GND
2	RXD
3	TXD
4	GND
5	-
6	GND
7	RXD
8	TXD
9	FRAME GND

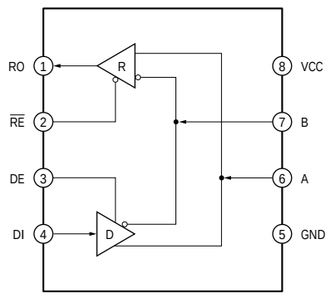
MAX3100CEE (IC1105, 1108)



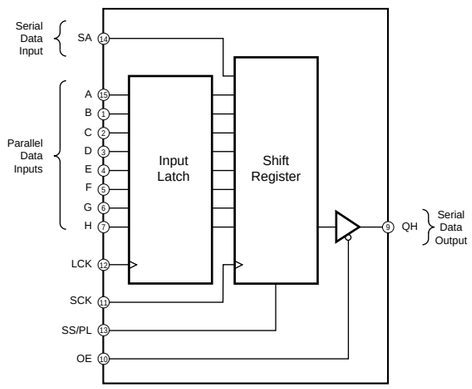
MB90096PF-127/G-178 (IC1107, 1110)



MAX487ECSA (IC1103, 1106)

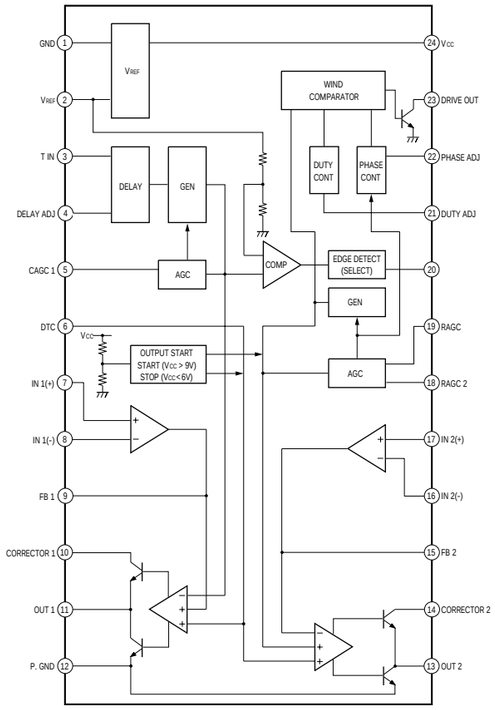


MC74HC589AFEL (IC1112)

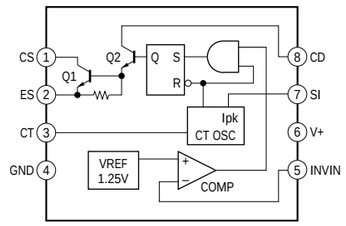


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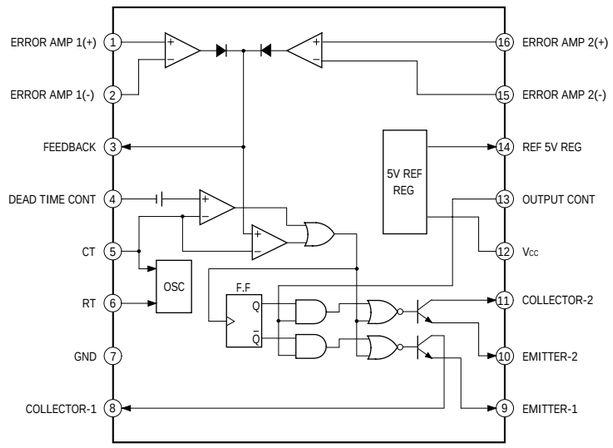
CXA1544M-T6 (IC502)



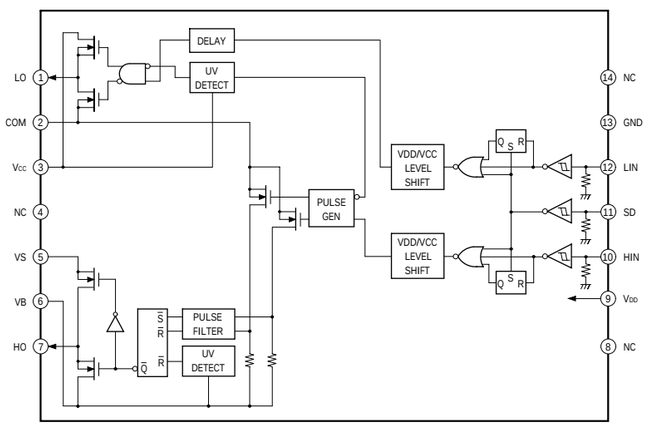
NJM2360AM (TE2) (IC510)



TL494CNS-E20 (IC503)



IR2112 (IC506)

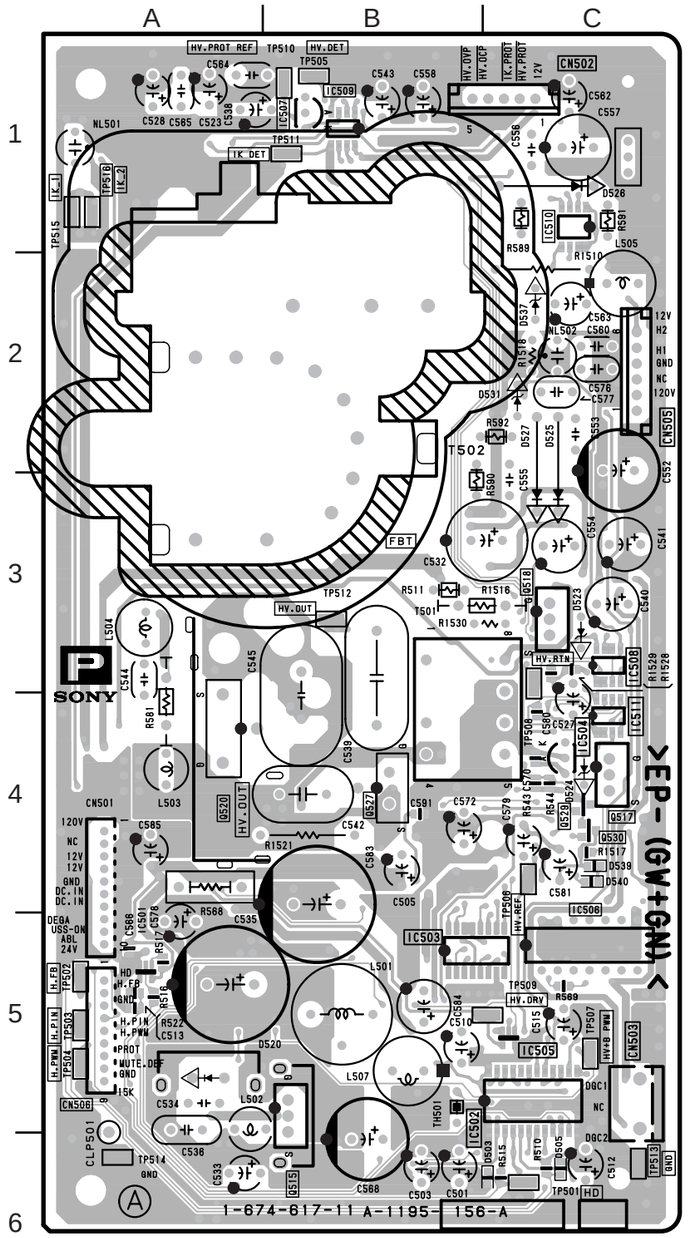


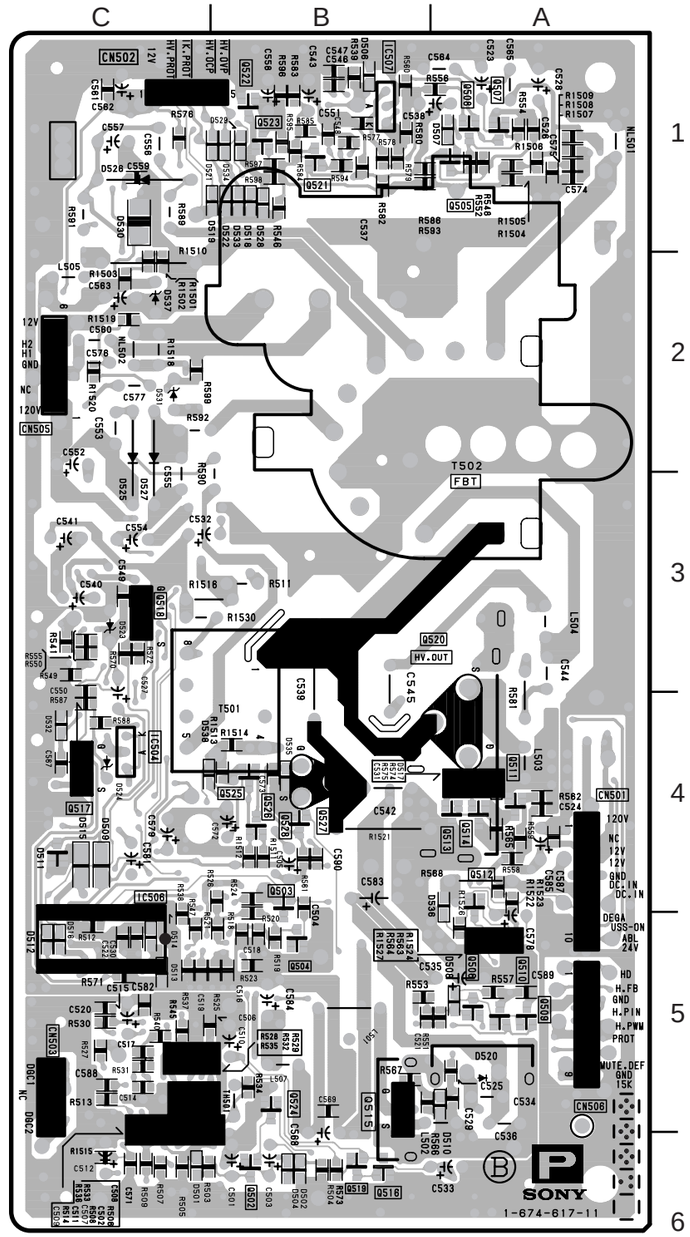
[P BOARD]

*: B SIDE

D501	*C-6		TP501	C-6	
D502	*B-6		TP502	A-5	
D503	C-6		TP503	A-5	
D504	*B-6		TP504	A-5	
D505	C-6		TP505	B-1	
D506	*B-1		TP506	C-4	
D507	*A-1		TP507	C-5	
D508	*A-5		TP508	C-3	
D509	*C-4		TP509	B-5	
D510	*A-6		TP511	B-1	
D511	*C-4		TP513	C-6	
D512	*C-5		TP514	A-6	
D513	*C-5		TP515	A-1	
D514	*C-5		TP516	A-1	
D515	*C-4				
D516	*C-5				
D517	*B-4				
D518	*B-1				
D519	*B-1				
D520	A-5				
D521	*B-1				
D522	*B-1				
D523	C-3				
D524	C-4				
D525	C-2				
D526	C-1				
D527	C-2				
D528	*B-1				
D529	*B-1				
D530	*C-1				
D531	C-2				
D532	*C-4				
D533	*B-1				
D534	*B-1				
D535	*B-4				
D536	*A-4				
D537	C-2				
D538	*C-4				
D539	C-4				
D540	C-4				
IC501	A-5				
IC502	B-6				
IC503	B-3				
IC504	*C-4				
IC505	C-5				
IC506	C-4				
IC507	B-1				
IC508	C-3				
IC509	B-1				
IC510	C-1				
IC511	C-4				
Q502	*B-6				
Q503	*B-4				
Q504	*B-5				
Q505	*A-1				
Q506	*A-5				
Q507	*A-1				
Q508	*A-1				
Q509	*A-5				
Q510	*A-5				
Q511	*A-4				
Q512	*A-4				
Q513	*A-4				
Q514	*A-4				
Q515	B-6				
Q516	*B-6				
Q517	C-4				
Q518	*C-3				
Q519	*B-6				
Q520	A-4				
Q521	*B-1				
Q522	*B-1				
Q523	*B-1				
Q524	*B-6				
Q525	*B-4				
Q526	*B-4				
Q527	B-4				
Q528	*B-4				
Q529	C-4				
Q530	C-4				

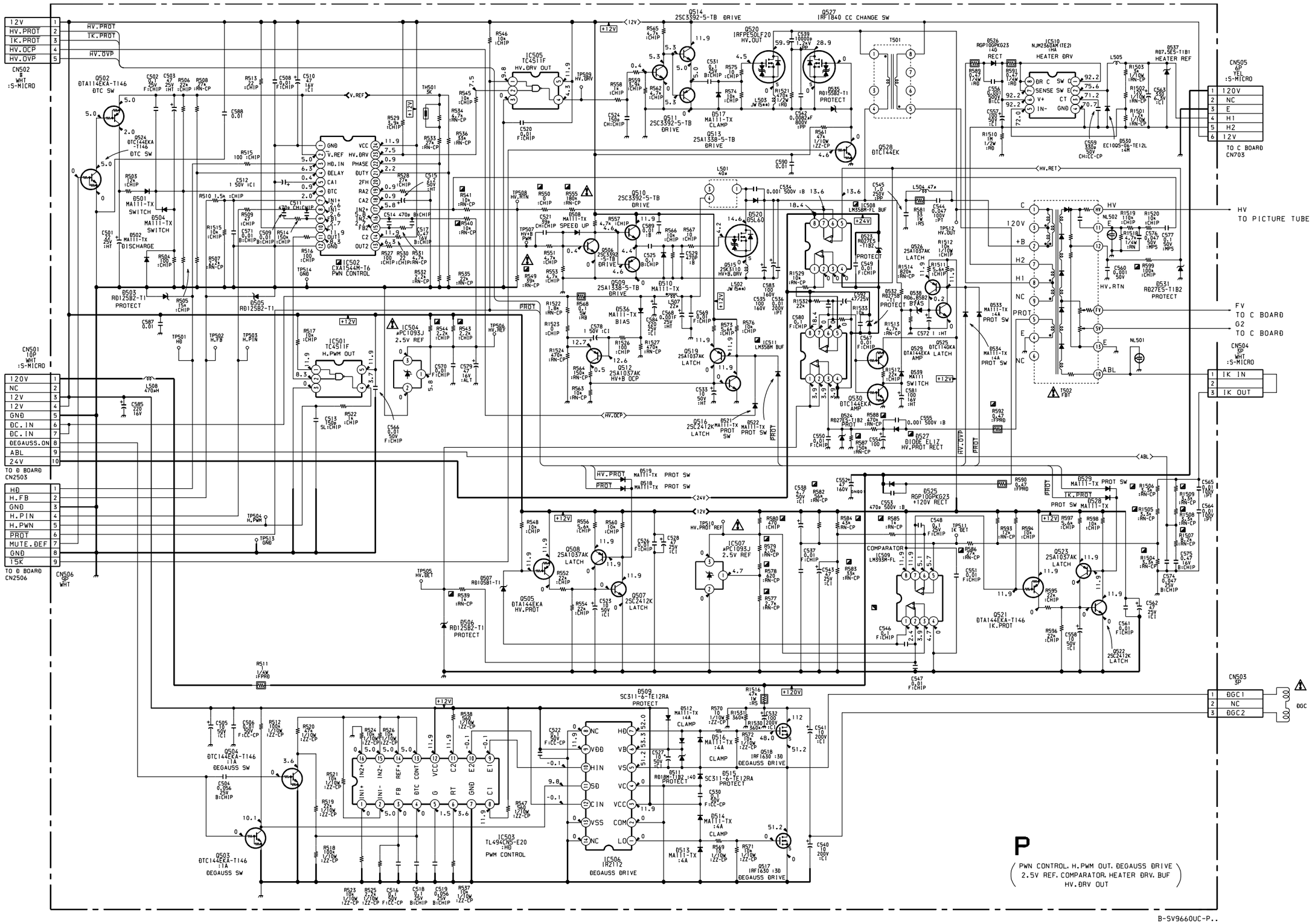
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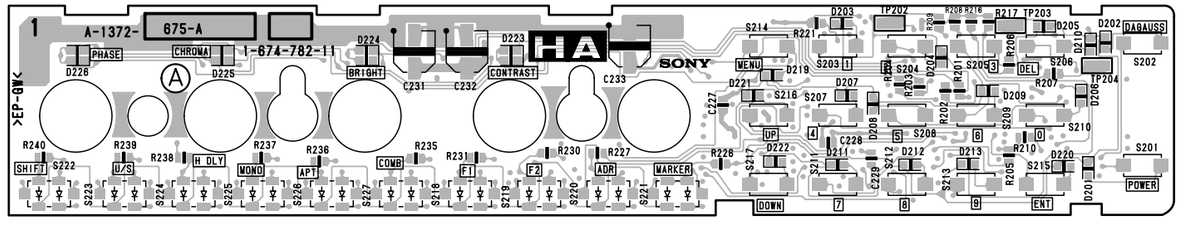




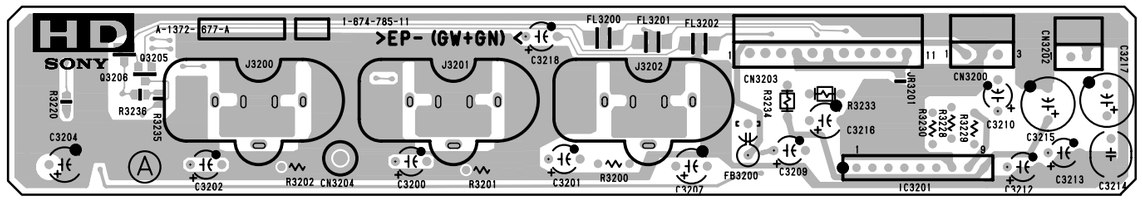
P –A SIDE–
SUFFIX: -11

P –B SIDE–
SUFFIX: -11

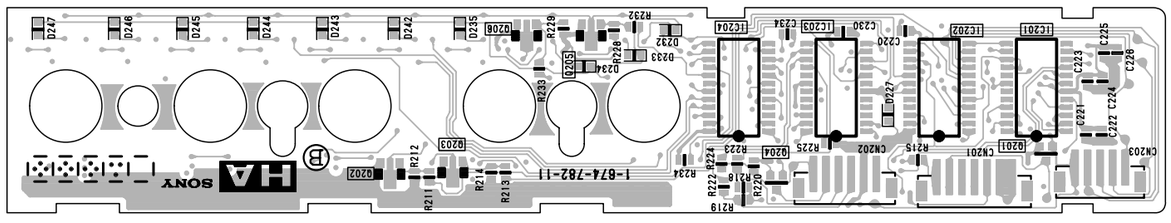

CN502 8P WHT :S-MICRO
12V
HV.PROT
IK.PROT
HV.OCP
HV.OVP
CN501 10P WHT :S-MICRO
120V
NC
12V
12V
GND
DC.IN
DC.IN
DEGAUSS.ON
ABL
24V
TO D BOARD CN2503
HD
H.FB
GND
H.PIN
H.PWM
PROT
MUTE.DEF
GND
15K
TO D BOARD CN2506
CN506 9P WHT
IC501 TC4511F H.PWM OUT
IC502 CXA1544M-T6 PWM CONTROL
IC503 TL494CNS-E20 :HD PWM CONTROL
IC504 APC1093J 2.5V REF
IC505 TC4511F HV.DRV OUT
IC506 IR2112 DEGAUSS DRIVE
IC507 APC1093J 2.5V REF
IC508 LM358M-FL BUF
IC509 LM393M-FL COMPARATOR
IC510 NJM2360AM(TE2) :HA HEATER DRV
IC511 LM358M BUF
Q501 MA111-TX SWITCH
Q502 DTA114EKA-T146 DTC SW
Q503 DTC144EKA-T146 :1A DEGAUSS SW
Q504 DTC144EKA-T146 :1A DEGAUSS SW
Q505 DTA144EKA HV.PROT
Q506 RD12SB2-T1 PROTECT
Q507 2SC2412K LATCH
Q508 2SA1037AK LATCH
Q509 2SA1338-5-TB DRIVE
Q510 2SC3392-5-TB DRIVE
Q511 2SC3392-5-TB DRIVE
Q512 2SA1037AK HV+B OCP
Q513 2SA1338-5-TB DRIVE
Q514 2SC3392-5-TB DRIVE
Q515 2SK3110 HV+B.DRV
Q516 2SC2412K LATCH
Q517 IRF1630 :3D DEGAUSS DRIVE
Q518 IRF1630 :5D DEGAUSS DRIVE
Q519 2SA1037AK LATCH
Q520 IRFPE50LF20 HV.OUT
Q521 DTA144EKA-T146 IK.PROT
Q522 2SC2412K LATCH
Q523 2SA1037AK LATCH
Q524 DTC144EKA -T146 DTC SW
Q525 DTC144EKA AMP
Q526 2SA1037AK LATCH
Q527 IRFI840 CC CHANGE SW
Q528 DTC144EK
Q530 DTC144EKA AMP
D501 MA111-TX SWITCH
D502 MA111-TX DISCHARGE
D503 RD12SB2-T1 PROTECT
D504 MA111-TX SWITCH
D505 RD12SB2-T1
D506 RD12SB2-T1 PROTECT
D507 RD10SB1-T1
D509 SC311-6-TE12RA PROTECT
D510 MA111-TX
D511 RD18K-TJ82 :40 PROTECT
D512 MA111-TX :4A CLAMP
D513 MA111-TX :4A
D514 MA111-TX :4A CLAMP
D515 SC311-6-TE12RA PROTECT
D516 MA111-TX :4A CLAMP
D517 MA111-TX CLAMP
D518 MA111-TX PROT SW
D519 MA111-TX PROT SW
D520 D5L60
D521 MA111-TX PROT SW
D522 RD27ES-T1B2 PROTECT
D523 RD6.8SB2 PROTECT BIAS
D524 RD27ES-T1B2 PROT
D525 RGP10GPKG23 +120V RECT
D526 RGP10GPKG23 :40 RECT
D527 DIODE ELIZ HV.PROT RECT
D528 MA111-TX PROT SW
D529 MA111-TX PROT SW
D530 EC10QS-06-TE12L :4M
D531 RB27ES-T1B2 PROTECT
D533 MA111-TX :4A PROT SW
D534 MA111-TX :4A PROT SW
D535 RD15SB2-T1 PROTECT
D536 MA111-TX BIAS
D537 RD7.5ES-T1B1 HEATER REF
D539 MA111 SWITCH
L501 40a
L502 47a
L503 JW (5A)
L504 47a
L505
L507 22a
L508 470uH
NL501
NL502
TH501 5K
T501
CN505 6P YEL :S-MICRO
CN504 5P WHT :S-MICRO
CN503 3P
HV TO PICTURE TUBE
FV TO C BOARD
G2 TO C BOARD
E
ABL
IK IN
IK OUT
EGC
HV.RET
HV.OCP
HV.OVP
PROT
ABL
IK.PROT
+12V
+24V
+120V
V.REF
TP501 HD
TP502 H.FB
TP503 H.PIN
TP504 H.PWM
TP505 HV.DET
TP506 HV.REG
TP507 HV+B PWM
TP508 HV.MIN
TP509 HV.DRV
TP510 HV.PRO1 REF
TP511 IK DET
TP512 HV.OUT
TP513 GND
TP514 GND
P
PWM CONTROL, H.PWM OUT, DEGAUSS DRIVE
2.5V REF, COMPARATOR, HEATER DRV, BUF
HV.DRV OUT
B-SV9660UC-P..



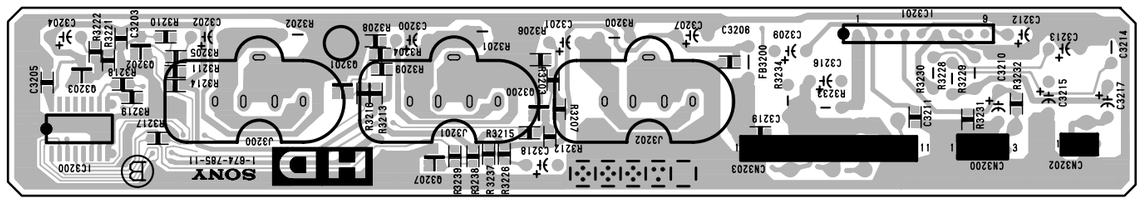
HA –A SIDE–
SUFFIX: -11



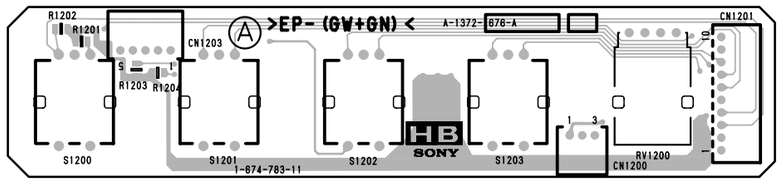
HD –A SIDE–
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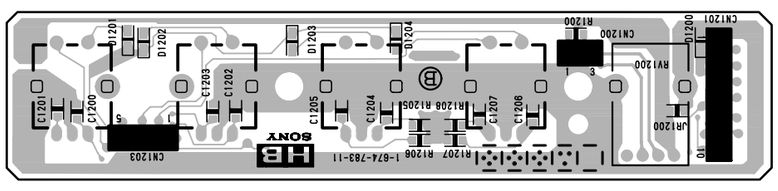
HA –B SIDE–
SUFFIX: -11



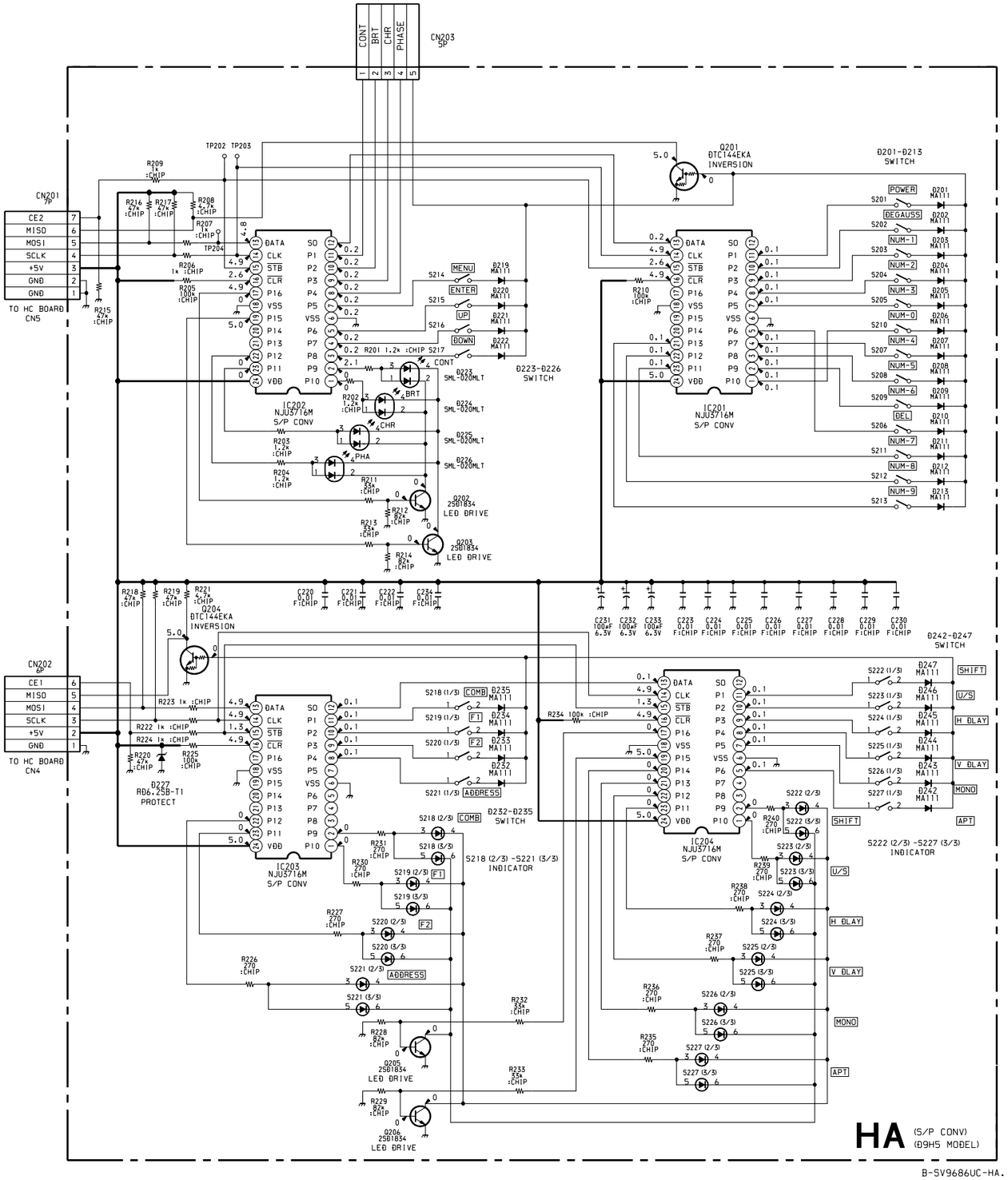
HD –B SIDE–
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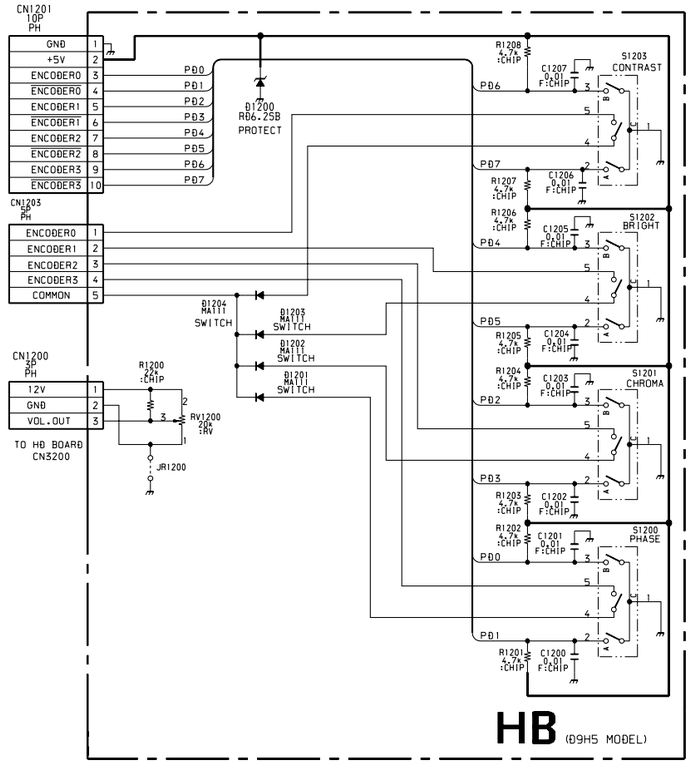
HB –A SIDE–
SUFFIX: -11



HB –B SIDE–
SUFFIX: -11

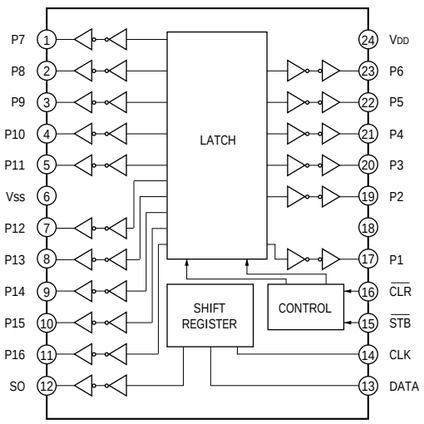


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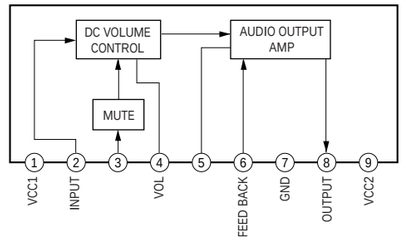


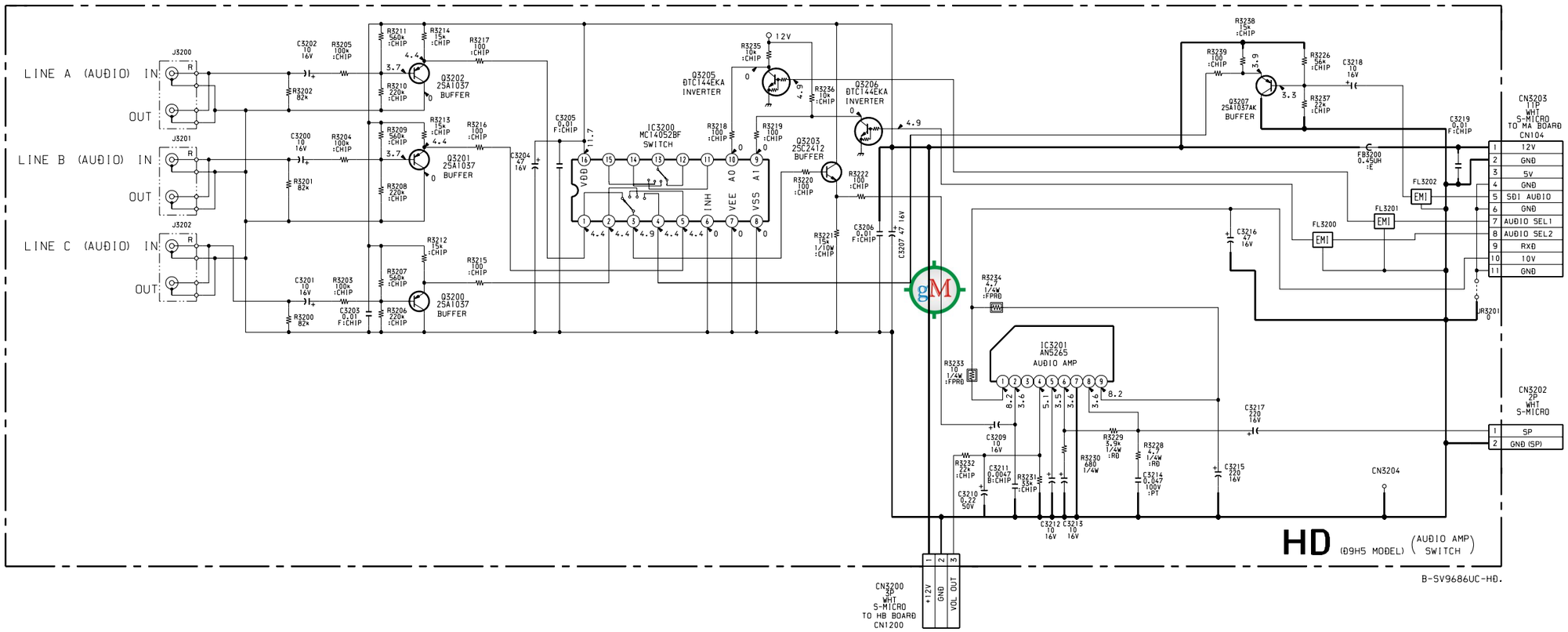
B-SV9686UC-HB.

NJU3716M (IC201, 202, 203, 204)



AN5265 (IC3201)

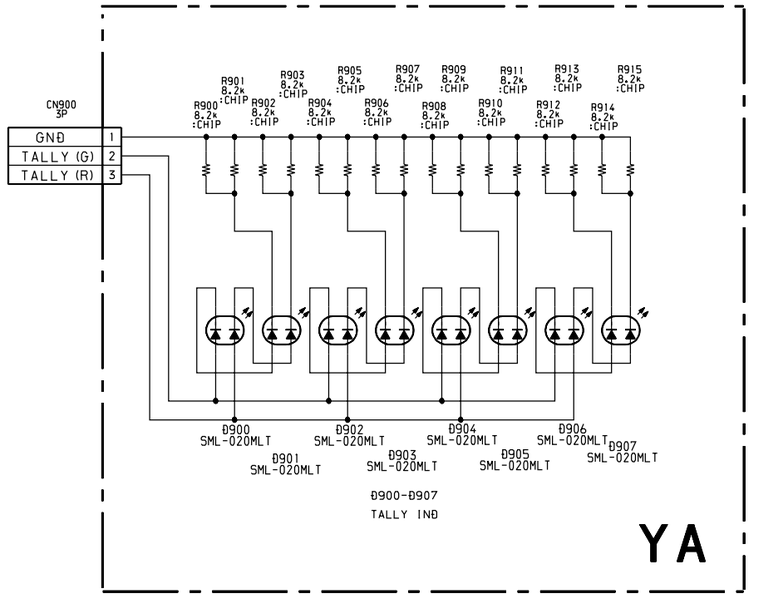






YA –B SIDE–

SUFFIX: -11

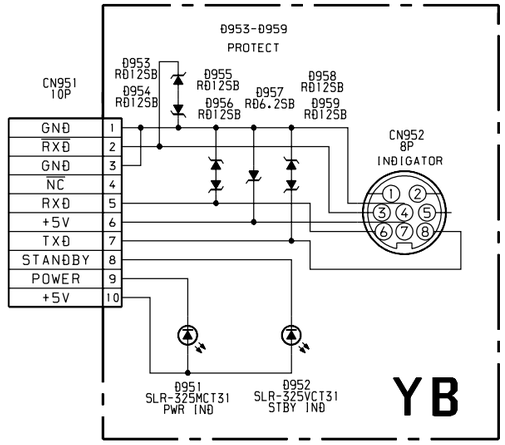


B-SV9660UC-YA.



YB –B SIDE–

SUFFIX: -11



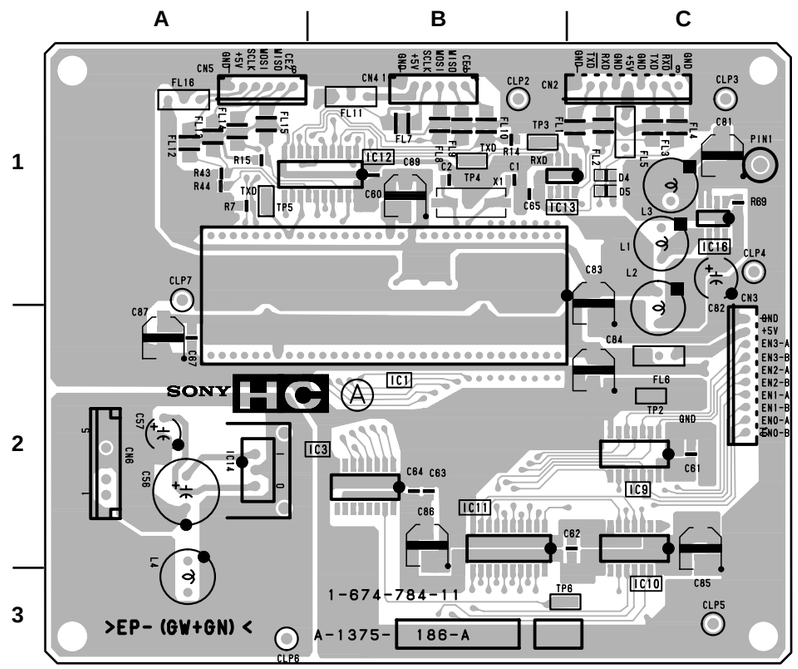
B-SV9660UC-YB.

[HC BOARD]

*:B SIDE

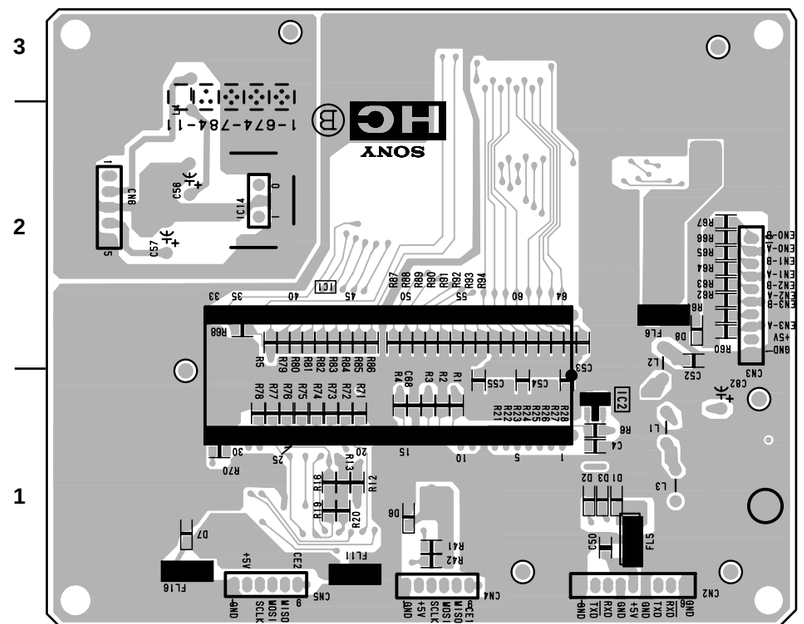
D1	* A-1
D2	* A-1
D3	* A-1
D4	A-1
D5	A-1
D6	* A-2
D7	* A-3
D8	* A-2
D9	A-1
IC1	B-2
IC2	A-1
IC3	B-3
IC4	* B-5
IC5	* B-4
IC6	* B-3
IC7	* B-3
IC8	* B-5
IC9	B-1
IC10	B-1
IC11	B-2
IC13	A-1
IC14	B-2
IC21	* B-4
Q4	A-3
TP2	A-1
TP3	A-1
TP4	A-2
TP6	C-1
TP7	C-3
TP8	C-3
TP9	B-3

HC BOARD



HC –A SIDE–

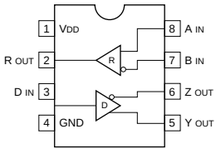
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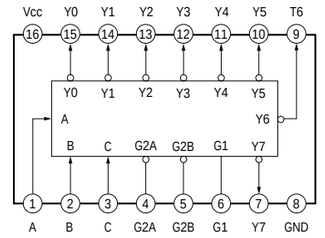
HC –B SIDE–

SUFFIX: -11

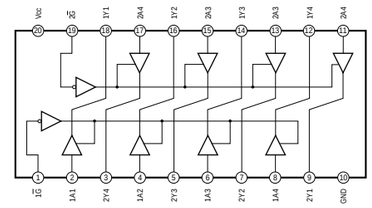
LTC490CS8 (IC13)



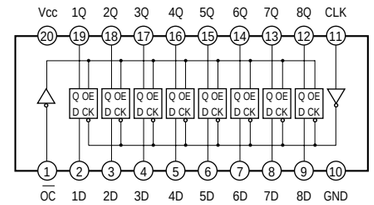
TC74VHC138F (EL) (IC3)



TC74VHC244F (EL) (IC12)



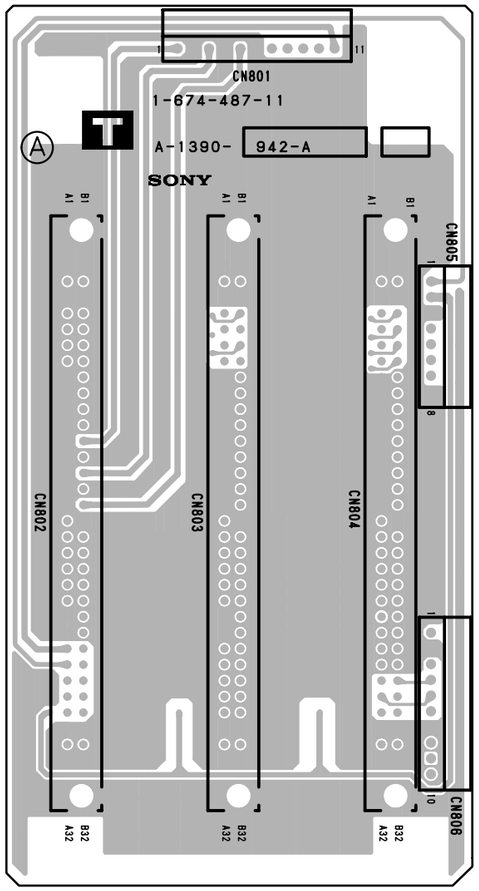
TC74VHC574F (EL) (IC11)



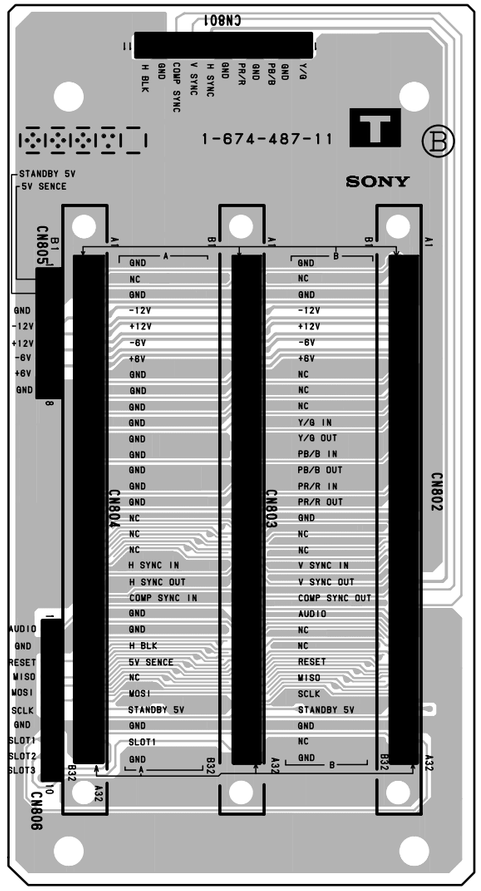
HC (D9H5 MODEL) (ADDRESS DECORDER. DC 10V REG. CPU BUFFER. RS422 DRIVE. BUS SHIFT)

B-SV9686UC-HC.

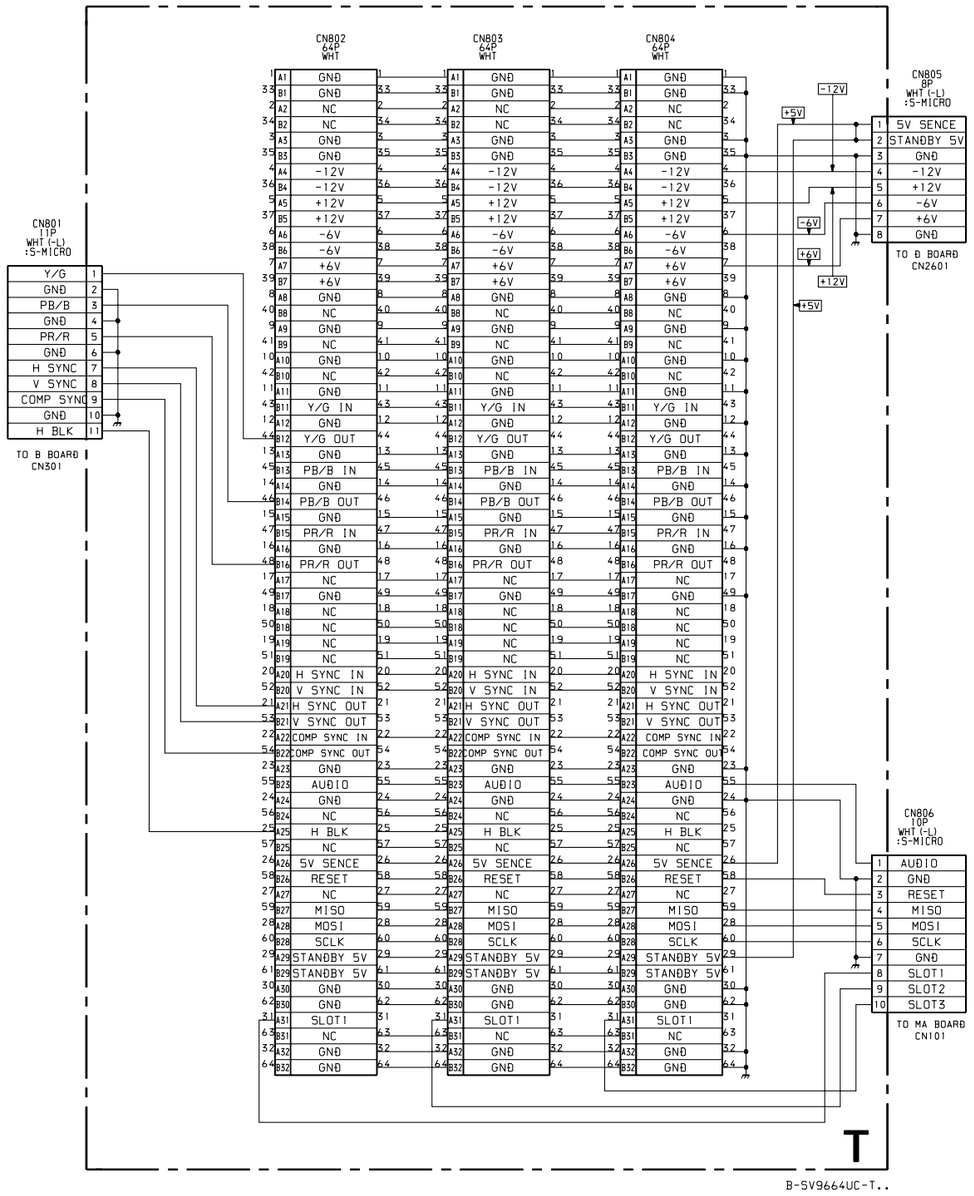
T BOARD



T –A SIDE–
SUFFIX: -11



T –B SIDE–
SUFFIX: -11



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Broadcasting & Professional Systems Company

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